THE LANCET.

VOL. I.] LONDON, SATURDAY, OCTOBER 20. [1832-33.

BENEVOLENT ASYLUM,

SYDNEY, NEW SOUTH WALES,

March 26, 1832.

OPERATION OF TYING THE ARTERIA INNOMINATA.

By W. BLAND, *Esq., Surgeon.*

Case.

JOHN MULLEN, aged 31, the subject of this operation, had perceived a small and throbbing tumour immediately above, and about mid-length of, the right collar-bone, two years ago; six months afterwards he became affected with superficial pain across the breast, resembling a sensation of tightness, but without any dyspnœa. There were also considerable pain and numbness extending along the right arm down to the wrist, and sometimes as far as the extremity of the first phalanx of the fingers, although the sensibility of the whole limb continued equal to that of the left side. He was now placed under surgical treatment, the tumour at this time, according to his statement, throbbing considerably, although not larger than a small pigeon's egg, and, in fact, hardly perceptible when the patient was in a recumbent position. From that period to the present, when he placed himself under my care, the treatment had been merely palliative, having consisted of two bleedings about six months ago—during the first six months, the application of a rag kept wet with cold water night and day—and an aperient pill every morning, with some other occasional laxative as required. Also, now and then, when there was considerable pain, a grain of opium at bedtime. The increase of the tumour from its observed commencement has been gradual and regular. The general health, which continued good during the earlier periods of the disease, has of late become gradually impaired, and within the last few days seriously so. He has, however, no other perceptible aneurismal affection, nor any disease of the heart. The pulse, which, two or three days before the operation, at which time he first came under my care, had ranged between 100 and 104, but was regular, on the day before, and the day of, the operation, fell to about 60, had become intermitting, and in every other respect was irregular. There was also almost insupportable pain of the left side; the tongue arid, and the dorsum covered with a dense blackish fur, with inability to lie any length of time on his left, in consequence of the above severe pain, and finding equal difficulty of lying on the right side, which had continued during the latter periods of the complaint, and was occasioned by it.

Operation.

The operation, in which I was assisted by Dr. Fattorini, my medical colleague at this institution, was performed this day in the presence of Drs. Smith, Ross, Rutherford, and Jacob.

The patient being placed in a horizontal position on a table with the head supported by pillows, an incision was made through the integuments, extending upwards about two inches from the atlantal edge of the sternum, in the direction of the fibres of the subjacent sterno-hyoid and thyroid muscles, and about one inch and a half downwards below the atlantal margin of that bone, for the purpose of obtaining sufficient room for the subsequent steps of the operation. The sternal insertion of the mastoid muscle was now divided, and the dissection further prosecuted by the careful separation of the fibres of the sterno-thyroid and hyoid muscles, in their longitudinal direction, partly with the edge, and partly with the handle of the scalpel. The fore-finger was now cautiously insinuated through the cellular substance and down to the arteria innominata, and that vessel having been separated from the adjacent nerves, the needle was slowly and deliberately introduced. The ligature, consisting of two threads, was now tied with much care, and with sufficient firmness, it was conceived, to cause the division of the inner coat of the

vessel, and the wound was covered with light dressings. Immediately after the operation, haustus c. liq. morph. acet. m. xxv et aqua.

Progress of the Case.

Nine p.m. No pain except that of the left side. V.S. ad ʒxviij.

March 27. Quarter to three a.m. Free from all pain; composed; short sleeps; pulse 132.

Five o'clock. Two cathartic pills.

Half-past six. Pulse 144.

Two p.m. Pulse 138. V.S. ad ʒx.

Half-past seven. Pulse 138; patient lying *on the right side*; inclined to sleep; no motion; repet. pilulæ.

28. Half-past five a.m. Calm night; slept at intervals as hitherto; in good spirits; tongue moist, less coated and dark; no motion; perspires freely, and has done so almost ever since the operation. Right upper extremity perspiring freely, warm, of about the same temperature as the left; no numbness, except in the fingers; tumour subsiding rapidly; no disturbance of the sensorium, nor at any time since the operation. Turns (though desired to do so with much caution) and lies on either side with perfect ease; no motion; pulse 126. V.S. ad ʒxviij; repeat pills; two hours afterwards a dose of salts.

Half-past three. Pulse 132, full; tongue moist, less coated and dark; one scanty motion. V.S. ad ʒxj; repeat pills and magnes. sulph.; should it become necessary in two hours afterwards, enema.

Seven p.m. Pulse 138. Two motions. Haust. anodynus.

29. Half-past four a.m. Two motions; free perspiration; no pain; sleep at intervals; pulse 120, regular, rather full and firm; diet tea, with milk; wound dressed for the first time; healthy.

Half-past seven. Pulse 132, full, hard; languor; drowsiness. V. S. ad ʒiij.

Half-past nine. Much relief; pulse 120, regular, moderately full. Lemonade; an egg; in other respects, diet as hitherto. Pilulæ cathartic.

Quarter to one p.m. Head quite relieved; pulse 126, regular, and neither hard nor full.

Quarter past six. Pulse 126; calmness; good spirits as in general; no motion. Repet. pilulæ. Magnitude of the tumour reduced one-third; no perceptible pulsation in any of the branches, either of the right carotid artery or right subclavian. Perfect use of both arms.

March 30th, half-past two a.m. A good night; pulse 114, firm, full; no motion. V. S. ad ʒiijss. Wound dressed (second time). Repeat pills, one egg.

Seven o'clock. Pulse 108, regular, full, firm; as usual good spirits; no motion. Pilulæ carthartic.

Half-past two p.m. No change.

Half-past nine. Pulse 108, full and firm; slight pain at the scrobiculus cordis; one copious motion; wound dressed; PAIN GONE; breakfast, one egg, one biscuit, one cup of coffee with milk; dinner, half a biscuit, tea with milk; favourite beverage, lemonade. V. S. ad ʒij.

31st, half-past six. A good night; pulse 96, full, firm; tongue moist, less and less coated; two scanty blackish motions; wound dressed, healthy. V. S. ad ʒiij. Transverse admeasurement of the tumour in various directions from three inches to three and a quarter.

Half-past ten p.m. Pulse 108, full, firm; patient stronger, and feels better than at any time since the operation; no pain of any kind, but at times much restlessness. V. S. ad ʒv. Wound dressed.

April 1st. An excellent night; pulse 96, full, soft, regular; wound healthy, dressed. V. S. ad ʒvj. Permitted to rise at his own earnest entreaty for half an hour.

Half-past eight. Pulse 108, full, firm; pain of the left side, in the same spot in which it had been felt just previously to the operation; one motion. V.S. ad ʒij, empl. lyttæ later. Omit egg. Diet to consist solely of gruel, barley-water, rice-water, and these always tepid.

2nd, half-past seven a.m. A good night, though with little sleep; pain utterly gone; no motion; pulse 120, soft, regular, and moderately full; blister dressed; blood not in the least buffed. Aperient pills to be repeated, if requisite, in three hours.

Half-past six p.m. Pulse 102, full but soft; two motions. V.S. ad ʒxij.

3rd, half-past seven a. m. An excellent night; composure, calmness; pulse 94, moderately full. Perstet.

Half-past nine p.m. Pulse 102, soft, moderately full; one motion; return of slight degree of numbness in the right arm and hand; bread and tea three times a day; rice-water.

4th (ninth day). A good night; pulse 96, during sleep, after dressing the wound 90; soft, full. Perstet.

Half-past eight p.m. Pulse from 90 to 96; one motion; tongue a little furred.

5th (tenth day). A good night; pulse 90 to 96, full, soft, regular; wound fast filling; discharge creamy, less and less copious; tongue somewhat more furred than yesterday, or the last two days. Bread, tea, lemonade.

Ten p. m. Pulse 96, rather more full and firm than for the last two days. Some morbid heat; slight headache; tongue coated; two motions; keen appetite. Average transverse admeasurement of tumour from three to four inches. V. S. ad ʒv. Bread, tea, rice-water, lemonade.

6th (eleventh day). A good night; pulse 88 to 90, soft, moderately full; tongue less coated; no motion; wound healthy, fills fast. Pilulæ catharticæ.

Half-past nine p.m. Two motions; pulse 88 to 90, soft; tongue becoming more clean.

7th (twelfth day). Excellent night; pulse 84, clean, regular, moderately firm; wound healing fast; tongue more clean; appetite good; one motion. Perstet.

8th (thirteenth day). Pulse 84; appetite good; one motion; wound healing.

9th (fourteenth day). Pulse 108 (but only half an hour, as it should seem, after his dinner). V. S. ad ʒiij.

10th (fifteenth day). A moderately good night; but, this morning, considerable soreness of the throat (i.e. of tonsils and pharynx), similar, he states, to an attack he had had a short time before he came under my care, and for which at that time he was wearing a piece of flannel; some dysphagia; pulse 108, somewhat full, hard; wound nearly closed; discharge scanty, but slightly sanious; some febrile heat; one good motion. V. S. ad ʒxiv. Immediate relief.

Half-past nine p.m. Pulse 108; slight headache; cynanche stationary.

11th. Pulse 102, regular and soft; cynanche stationary; no motion; wound healthy; discharge, however, still slightly sanious. Pilulæ catharticæ.

Ten p.m. Pulse 102; surface dry, hot; tongue coated; throat tender, painful; one motion; no food, except a little tea, either to-day or yesterday.

Pulv. Diaphoret. c. pulv. ant. and potass nitrat. Empl. lyttæ extern: faucib., appd.

April 12th (seventeenth day). Half-past four a. m. One motion; hemorrhage from the wound to the apparent extent of about four or five ounces, but which has now ceased; pulse 96, regular, but somewhat weak; febrile symptoms relieved; blister dressed; throat better; wound nearly closed. Repet. pulv.

Habeat etiam omnib. hor. tinct. digit. gtt. x.

Fruit, by his own desire; lemonade.

Half-past ten a.m, Pulse 108, somewhat contracted, hard. V. S. ad ʒvi immediately after bleeding, soft, full, and regular. He has eaten one roasted apple, and taken some tea and bread.

Half-past seven p.m. Second bleeding from wound of only a few ounces, and which had ceased, as in the former instance, before my arrival; in other respects a good day. Obscure pulsations, or faint, irregular, thrilling motions perceptible in the tumour, and which appears to be, and is found to be, increased in size, viz. from the average transverse measurement of 2½ inches to 3¼ inches since morning. Director passed to the depth of about three-fourths of an inch by the side of the ligature, but no appearance of blood. V.S. ad ʒxiv. Surface of the wound sponged with warm water, and left covered only with his clothes. Directions, that it should immediately on the return of hemorrhage be exposed to the air while I was being sent for. Pulse 108, V.S. ad ʒxij; subsequently to bleeding, the same in number, but more soft and weak, yielding to pressure, though still regular. One motion during the day; except tea, no sustenance since last visit; no pain; good spirits; throat nearly well; flannel to throat. Haust. anodynus.

April 13 (18th day). Two o'clock, slight bleeding, but which immediately ceased, and I was therefore not sent for. Hemorrhage a second time at six, to the amount apparently of ten or twelve ounces; in other respects an excellent night, effect, perhaps, of the anodyne. He is at at present disposed to sleep; the hemorrhage has ceased; pulse, however, weak, contracted, intermitting, and in other respects irregular; extremities yet warm, except the right arm; complains of no pain or uneasiness; says he is only weak; soon afterwards, however, desires that the right-hand might be cooled, though it is as cold as marble, and, on being questioned, says no other part feels too hot. Drank by his own desire a little lemonade. Sensorium perfectly undisturbed, and so remained till within a minute or two of his decease, at seven o'clock.

Dissection.

Present, Drs. Smith, Rutherford, Ross, Johnson, and some other medical friends.

The thorax having been carefully and extensively opened, the heart, together with the arch of the aorta, arteria innominata, right carotid artery, and subclavian, including the aneurismal tumour, were removed; and in the course of, and subsequent to, which dissection, the following circumstances were observed:—

1st. That the pleura and contiguous cellular substance *had been* in no way injured by the operation.

2nd. That the wound had been almost entirely closed from its fundus up to the surface, so that no more than about a teaspoonful of matter was found in its cavity.

3rd. That the ligature which encircled the artery close to its grand division into the right subclavian and carotid, had almost completed the division of the artery.

4th. That the carotid artery had become closed throughout its entire extent by solid coagula, and that about two thirds of the arteria innominata itself had become closed by a solid plug of coagulum adhering to its walls, while, on the contrary, the subclavian, from its commencement up to the aneurismal tumour itself, still remained pervious, and whence alone, no doubt, the fatal hemorrhage had proceeded.

This portion of the subclavian also seemed, on careful examination, to be slightly enlarged, and its coats somewhat thickened. The axillary artery was pervious, and contained no coagula.

The remainder of the thoracic and the whole of the abdominal viscera, were in a sound state.

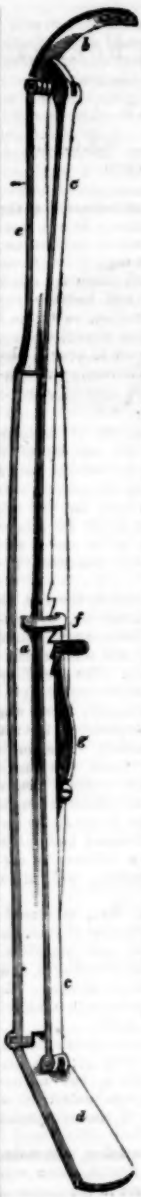
The heart, together with the portions of the arterial tube implicated in the disease, or concerned in the operation, has been carefully preserved. The above is a correct sketch of the parts.

Observations.

The principal difficulty experienced in the operation was the separation of the artery, and the passing of the ligature; to obviate such difficulty on future occasions, I have had a needle constructed upon an entirely new plan, which will accompany this paper, and I hope will be found to answer the object intended. (*See annexed engraving.*)

Respecting the propriety of the operation, I beg to observe, that it was the opinion of the medical gentlemen present, that no other operation (from the advanced state of the case) seemed to offer any chance of success, while it was the unanimous opinion, that without an operation the patient, who at this time was under extreme bodily suffering, as well as mental anxiety, could not have survived more than a few weeks, or perhaps days, and that the operation was adopted at the repeatedly-expressed and earnest wish of the patien himself. The after treatment was conducted with the general view of allaying irritation, and reducing the sanguiferous system to as low a state as seemed consistent with the safety of the patient, and the rapid repair of the unavoidable injury from the operation, and then of carefully preserving it in this state. Hence, considering the reduced condition of the patient (the consequence of his long-protracted painful disease), the copious bleedings at the commencement, accompanied with the lowest possible diet, and again the repeated small bleedings afterwards. The fatal result I attribute partly, perhaps, to the somewhat diseased state of the artery, but still more to a want of decision on the 14th and 15th days after the operation, in not having bled with a more *liberal hand*, an error which arose almost solely from my doubt as to the cause of the excitement, inasmuch as I had discovered that an equal or greater degree of excitement had occurred in a former instance (see 1st April) from the extreme imprudence of the patient, and of which he would have left me uninformed. The inflammatory seizure in the last instance seemed to be the mere effect of cold, caught, as was afterwards ascertained, by the patient imprudently throwing aside the additional flannels used as a protection to the right side of the trunk, and the upper extremity and neck.

The principal, if not the sole source of the hemorrhage, might have been inferred prior to the death of the patient, from the previous history of the case, together with the obscure and irregular thrilling motion in the tumour, as well as its increased magnitude, noticed on the 12th of April, the day before his decease.



Description of the Needle.

a the flat part, or handle, of the needle, on which the lever (*c c*) rests that is to elevate or depress the curved end of the needle *b*, which end *b* is attached to the handle *a* by a hinge. In the curved piece are two small holes for the ligature. *d* a moveable flap which may be brought down so as to form a straight line with the flat part *a*, to which it is attached by a hinge. Or it may be elevated so as to form nearly a right angle with the handle *a*, in which position it will depress the curved piece *b*, till the extreme point of *b* is in a straight line with *a*. When *d* is depressed to its full extent, the end of *b* will be brought forward towards *d* until the end of *b* curves at least half-an-inch over the handle *a*, that is, in a position which would allow of a straight line to be drawn from the extreme end of *b* to the point marked near *c*.

f is a little bridge which keeps *c c* in its proper place.

g is a spring attached by a screw to *a*, with a little elevation of its end to allow the thumb to press it back from the lever *a* when the curved end is about to be depressed. At this part in the lever *c* there are six small cogs, or teeth, in which a little tooth at the end of the spring *g* catches when at rest, preventing *d* from being elevated until the spring *g* is pushed away, but from the direction of the cogs allowing the curve *b* to be pulled forwards and elevated when *d* is depressed.

The left hand end of *c* is attached to a short neck, which is fixed to *b* and united to *c* by a hinge. The whole is constructed of steel. The drawing is a full length representation of the instrument.

CASES OF

PHLEGMASIA DOLENS

SUCCESSFULLY TREATED WITH

IODINE.

By N. C. Bacon, *Esq., M.R.C.S.L., North Walsham.*

I have been induced to believe that the subjoined cases of phlegmasia dolens possess interest enough to merit publication, because the disease, as it occurred in these cases, is one about which there is much discrepancy of opinion, and because the treatment which I pursued is, as far as I know, new, and deserving attention from the promptitude of its control over a disease always considered distressing and intractable.

CASE I.

Elizabeth Pither, ætat. 20, of delicate leucophlegmatic habit, the subject of a bronchocele, after having for several weeks suffered considerably from dyspepsia, was attacked April 1st with pain on the left hip, shooting on the course of the sciatic nerve. I took the case to be one of sciatica, and commenced the treatment accordingly.

April 3. I found that during the last 48 hours, tumefaction had come on, and extended over the entire limb, accompanied with excruciating pain, and almost complete inability of motion. The swelling was tense, white, and elastic, and the heat of the limb greatly increased; there was exquisite tenderness, especially in the course of the femoral vessels. The pulse was 130, and feeble; there was much fever; tongue pale and glazed; urine scanty; bowels regular. Ordered eight leeches to the limb, to be followed by hot anodyne fomentation. Calomel and opium every third hour, with a mixture of carbonate and acetate of potash, and nitric ether.

4. Tumefaction, pain, &c., increased; there are great heat and dryness of skin, but the countenance is pale and bloodless; there is such exhaustion of strength, that the smallest exertion induced fainting. The respiration is panting; pulse 150. Ordered mild nutritive diet. Pt. med.

April 6. There has been such exhaustion, with fainting, and fluttering at the heart, since last report, that there has been a necessity for occasional administrations of stimuli. No mitigation of the symptoms. Pergat.

8. The disease has now taken possession of the right limb; its first invasion was felt by pain and tenderness in the course of the femoral vessels; the whole extremity now presents the same appearance as the other has done. There is some abatement of the heat, pain, and tension, of the left limb, and its superficial veins have become remarkably developed, so as to give it a marbled appearance. General symptoms the same. Mouth slightly affected by the calomel. Orderd hyd. c. creta to be substituted for the calomel. Repet. alia medicam.

12. No improvement; the tumefaction has extended as high as the umbilicus, and the labia so swelled, as to render micturition exceedingly difficult. Pergat.

17. Finding little or no mitigation of the symptoms, though the system has been now for some time gently under the mercurial influence, and the diuretics have taken good effect, I resolved to alter my plan of treatment. Ordered

> *Iodinæ* gr. $\frac{1}{3}$;
> *Potas hydriod.* gr. xv;
> *Aquæ dist.* ℥iss, *ft. haust. ter die sumend.*

17. The only inconvenience experienced from the medicine, has been a burning sensation in the fauces. Symptoms somewhat mitigated. The dose of the hydriodate to be reduced to gr. x.

By perseverance in this plan of treatment, the disease gradually yielded. In ten days the pain and tension had abated, and the swelling assumed more the character of common œdema. The medicine was continued till the 15th of May, when little remained of the disease except considerable debility of the limbs. There were, subsequently, some slight returns of the symptoms, which were however easily arrested by a recourse to the same medicine.

CASE II.

Sophia Gaze, ætat. 18, of pale complexion and lax fibre, having generally enjoyed good health, was attacked in May last, with common phlegmonous inflammation of the leg; this yielded to the usual treatment, and she had nearly recovered her health, when she was suddenly seized.

June 5, with pain in the thigh; tumefaction of the whole limb rapidly supervened with exquisite tenderness. The femoral vessels might be traced by hard lines extending along their course, and the tenderness was most felt in their vicinity. There was great thirst, and heat of skin; pulse 120, and feeble; tongue furred, rather pale and flabby; urine scanty; bowels costive. There was so much febrile excitement, and such a morbid condition of the secretions, that I did not feel justified in commencing the iodine treatment. Ordered

Leeches and hot fomentations to the limb; a common purgative draught occasionally; calomel and opium with the diuretic mixture, as in the former case.

I persisted in this plan up to June 22nd, diminishing the quantity of mercury as it became requisite; no mitigation of symptoms had then taken place The disease on the 10th day had seized the right limb, and extended over it with the same phenomena as had occurred on the left.

June 23. Both limbs are enormously swelled; the one first attacked has become less tense and hot, and its superficial veins are remarkably developed. The saphena vein of the right thigh presents a hard line in its course, &c., as marked by a slightly red appearance externally. Skin hot and dry; great thirst and restlessness; pulse 110; tongue slightly furred; bowels costive. Ordered,

Iodine, gr. ¼;
Pot. hydriod. gr. x;
Aquæ ℥iss; *4tis horis sumend.*;
Haust. sennæ c. mag. sulph. p. r. n.;
Fomentations to the limb.

26. The medicine has produced no unpleasant effect; symptoms much the same; nights sleepless.

Pulv. ipecac. co., gr. x, h. s. s.;
Pergat.

29. There is considerable abatement of the pain and tenderness; the left limb pits on pressure, the right remains tense, and the saphena hard. There is great general debility; pulse 120; skin hot and dry. *Pergat.*

After this time the distressing symptoms speedily subsided; there remained grea swelling and debility of both limbs, with great feebleness of the general system. The medicine was continued till the 30th of July (the doses being gradually diminished in frequency), when the health and strength were re-established, and the extremities had recovered their natural appearance.

Remarks.—There are few diseases about which more contrariety of opinion has existed than phlegmasia dolens. Even at the present day there are many who dispute the possibility of its existence unconnected with the puerperal state. By Levret and other French authors, it has been considered as a "*depot du lait.*" By one author (White) it has been ascribed to inflammation and obstruction in the lymphatic vessels; by another (Tyre), to inflammation in the lymphatic glands of the groin; while a third (Dr. Hull), with no less confidence, proclaims the disease to consist in a peculiar inflammation in the muscles, cellular membrane, and interior surface of the skin. It is only very recently that the state of the veins in this disease has attracted attention. The histories of the above cases tend strongly to corroborate the opinion, that the cause of phlegmasia dolens is to be found in a peculiar form of phlebitis. This view of the pathology of the disease affords a very satisfactory explanation of its phenomena. The frequency of the disease in the puerperal state may, I think, be accounted for, by the morbid condition of the veins, so often induced by gestation, and the excitement of the system which succeeds parturition. It was curious to observe in the progress of the cases I have detailed, how, as the trunks of the veins became obstructed by inflammation, the branches about the limbs developed themselves. With respect to the treatment of this disease, I believe that we possess in iodine a remedy far more efficacious than any hitherto employed. I employed it in both the above cases before the acute stage had passed, and in both it seemed to exercise a decided control over the symptoms, without at all increasing the febrile excitement. If hereafter it should be found inapplicable in the first stage, it will at least be found highly valuable in the second stage of the disease, which, under the ordinary treatment, is always protracted and difficult of cure. In the cases above, the debility was great in both, and in the first extreme. Under the use of the iodine, the appetite and digestion became vigorous, and the strength was rapidly restored. In the first case after recovery had been pretty well established, there was a very considerable recurrence of the pain and tenderness, which were immediately arrested by a recourse to the iodine. I may mention, that the bronchocele, which was of considerable magnitude, was scarcely visible at the conclusion of the treatment.

North Walsham, October 9th, 1832.

CASE OF

FATAL ULCERATION OF THE STOMACH.

To the Editor of THE LANCET.

SIR,—If you deem the following case of simple ulceration of the stomach, fatal by perforation, of sufficient importance and interest to merit a place in the columns of your excellent periodical, I shall feel obliged by its insertion. The individual whose case I am about to relate, a young woman, 28 years of age, had always been in good health, and shown no signs of gastric affection till Saturday, Sept. 29th, when she was suddenly seized with great pain at the pit of the stomach, and vomiting.

She was bled; a draught containing ether and laudanum was given, and some purgative medicine administered. By the following day she seemed almost to have recovered, and remained tolerably well till Friday, October 5th, when at four p.m. she was again suddenly attacked with violent pain in the epigastric region and left hypochondria. In a short time she vomited some bilious matter; the belly became tympanitic, and she complained of much pain in the loins and over the whole abdomen. Her bowels had been thrice open during the day. As the sickness was rather urgent, and the pain most excruciating, she was ordered to take repeated doses of calomel and opium, and some blood was abstracted from the arm. At twelve p. m. there was no abatement of the symptoms; the tympanitic distention had very much increased; the countenance was expressive of great anxiety, and she seemed to be suffering the most extreme agony. The pulse was 136, and very feeble, and the whole body covered with a cold sweat. I took twelve ounces of blood from the arm, which appeared to produce a little relief, and ordered a terebinthinate enema. To continue the opium and have a large blister to the abdomen.

October 6, ten a.m. Has passed a restless night; skin hot; pulse 140, small and feeble; belly enormously distended; pain much aggravated on the slightest pressure; bowels not open since yesterday. To take repeated doses of calomel and extract of colocynth, and have a stimulating injection administered immediately.

Four p. m. Is evidently sinking; says she has no pain; surface cold; pulse scarcely perceptible

Half-past five. Died.

Inspection twenty-two hours after death.—An immense quantity of air, with but little odour, escaped upon opening the abdominal cavity. All the viscera were forced towards the spinal column, and seemed to have been much compressed by the confined gas. A few shreds of lymph were observed upon the right lobe of the liver, and the peritoneum, generally, was more vascular than natural. There was a circular perforation about two lines in diameter, through the anterior part of the stomach, near the lesser curvature, and about an inch from the cardia, through which a small quantity of dark-coloured matter had escaped. Internally, around the aperture, the coats of the stomach were much thickened; the margin of the opening was smooth and rounded, and it was clear there had been an ulcer, extending through the mucous, submucous, and muscular tissues, which had cicatrised, leaving no other barrier to the escape of the ingesta than the peritoneum. The whole of the mucous membrane lining the stomach was much thickened and softened, and one largish patch had a very dark, sloughy appearance. The intestines were not at all distended with air, and contained but little feculent matter. There was no effusion into the peritoneal cavity.

Several interesting cases of this affection will be found related in Dr. Abercrombie's excellent work on the diseases of the stomach and other abdominal viscera. He does not attempt, nor indeed have I anywhere seen, an explanation of the manner in which so large a quantity of gas gets into the peritoneal cavity. I shall not venture to hazard a conjecture about it myself, but should like to learn the opinion of yourself, or some of your intelligent correspondents upon a phenomenon at once so interesting and important.

I remain, Sir, your most obedient servant,

S. W. Fearn.

Derby, Oct, 10th, 1832.

CASE OF

METASTATIC PNEUMONIA.

To the Editor of The Lancet.

Sir,—If you deem the following case of metastasis from the lungs to the brain, and *vice versa*, followed by complete recovery, worthy of a place in your invaluable periodical, you will oblige your constant reader and obedient servant,

Henry Coward.

North Shields, Oct. 9th, 1832.

Richard Wilson, aged 13, of fair complexion, was attacked, December 27, 1831, with every symptom of pneumonia early in the morning after exposure to cold; general bleeding was immediately resorted to, followed by calomel and antimony, with ol. ricini every two hours, until the bowels were opened; the dyspnœa was something relieved until the evening, when it returned with increased severity. Bleeding, both local and general, assisted with the counter irritation of a blister and a mixture of digitalis, squills, and nitrate of potass, every three hours, was exhibited. Some sleep was now procured; the skin became moist, the kidneys performing their proper functions, and the urine depositing a thick sediment; no expectoration. He continued to improve until 10th January 1832, when all the distressing symptoms returned with increased violence, by incautious exposure to cold, with the addition of a troublesome cough; pulse full and quick. He was treated on the same principles as above, assisting with enemata. The symptoms continued increasing until a complete state

of asphyxia was formed; all that could be administered now, was a little wine and water. Suddenly his head became affected, when his breathing was less laborious. He was now enabled to swallow a little milk and water, in fact, metastasis had evidently taken place; he then fell into a comatose state, but his pulse became *calmer* with moisture of the skin; thirst less; but took any fluid when offered to him. Leeches were applied to the temples, with a blister to the nape of the neck, assisted with a febrifuge and warm-bath. He continued in this state four days, without being able to articulate one word; the power of speech now partially returned, when he mildly asked "What is the matter?" The pneumonic symptoms now returned; difficulty of breathing, increase of pulse, &c., when I had recourse to local bleeding and small doses of digitalis, with the external application of a blister, kept open with ungt. sabinæ. The symptoms were again subdued, and again the delirium returned, and so on alternately for some time, which left him ultimately in a very weak state; but with milk diet and change of air he is now perfectly recovered, and has returned to school, which, considering the alarming sympotms, is more than I anticipated.

TREATMENT OF THE

MALIGNANT CHOLERA

WITH

TARTARISED ANTIMONY.

To the Editor of THE LANCET.

SIR,—I have always, and that in about fifty cases, cured this disease, truly marked by rice-water or urine-like-looking stools, where coldness from exhaustion had not taken place, by giving thirty grains of tartarised antimony, in doses of five grains every twelve minutes; and, three hours after the vomiting hath stopped, following it by about fifty grains of submuriate of mercury. Those so treated have not kept their beds more than two days, and have always followed their business within the week.

After the middle of July, cholera morbus first clearly showed itself in my neighbourhood, when I had two cases, where, having cramps early, I was therefore called in time, and on giving ant. tart. gr. iij, or gr. iv, every twelve minutes till well vomited, and following it in two or three hours after the vomiting stopped with thirty or forty grains of calomel, both got well at once. Looking on the disease in its general bearings as most like fever, I had long made up my mind so to treat it.

Had many about this time, and have had since, having what I have called in my return to our Local Board of Health "warning cases," stools being *thin* only, with nausea; slight cramps of the legs; muddly headach; slightly furred tongue; feeling of tremor on exertion; occasional catches of pain here and there; rumbling or feeling of distention in the bowels; feeling of uneasiness about the præcordia. All these were treated in a similar way, and not one has had the disease to attack them in the decided form.

Cases of the decided form have *watery* stools, either like gruel or rice-water, or of a urine-like look, with white flakes therein; generally there is nausea or vomiting more or less violent, and in some the cramps begin early, but mostly not until the body has been much drained. After the watery discharges have lasted from three to six hours, the cheeks* and extremities begin to get cold.

The next decided case was on July 28th. Eliz. Vining, aged 40, at Landrake, a village four miles from Saltash, containing about 400 or 500 persons on the top of a hill, where abject poverty is not felt. She was a clean, industrious woman, and had been to Devonport two days before. Was taken at five a.m. with vomiting and purging; saw her at twelve at noon. Face and hands cold and purple, fingers shrivelled, profusely sweating, and would not keep the bedding over her; voice strong but husky; treated as the former ones; and also used strong liniment of ammonia, so as to take off the cuticle in large patches all up and down the back and front of the body. Kept bladders of boiling water to her body, and used friction until she would not bear it any longer. Never had bilious vomiting, but became warmer during the action of the antimony. Ceased to vomit about two or three p.m. Died in 32 hours from attack.

Between this time and Aug. 21st, saw three cold and desperate cases; did nothing for them; two of them died within 24 hours of the attack, and one lived 48 hours.

Aug. 21. Phillis ——, aged 40, taken with vomiting and purging at Landrake at five a.m.; and though her sister and sister's husband had died of the disease in the same house, and she had been rebuked for not using in her sister's case the medicine which I had left at Landrake—knowing all this, and well knowing the presence of the disease, still she set out on foot for Devonport. She dropped on the road three miles on, soaked with rain; saw her at nine a.m. cold, and turning blue, and pulse

* The word "cheeks" was inadvertently printed "chest" in a notice of Mr. Littleton's treatment, page 49.

creeping. Gave eight doses of five grains of tartar emetic without success; no bilious vomiting; caused to vomit two or three hours after taking the medicine, then took plenty of gruel with spirit in it, and drank freely of watery drinks with carb. sodæ therein; died in about 32 hours from attack.

22. Francis Cloke, aged 24, at Landrake; purging all night, and from his looks of illness recognised by his master, but would go home about a mile before he would take the medicine left at Landrake in thirty-grain packages, to be put into twelve meat-spoonsfuls of water, and two meat-spoonsfuls to be taken every twelve minutes till well vomited, and as long as he can bear it. When I saw him, he had taken the full quantity, and had had bilious vomiting; cold in the cheeks; pulse creeping; cramps severe. Gave ℥iv rum, and ℈ij calomel; warmth sufficiently improved when I saw him in one or two hours; had a drunken look on his countenance for seven or eight days, and drowsy speech, and could not sit up for ringing of the head and fluttering of the heart; had the 40 or 50 grains of calomel repeated twice, and infus. sennæ; to keep the bowels lax. It was about three weeks from the attack before he could work.

Aug. 22. Eliz. Elford, aged 40, in Saltash, kept her bed, 12 at noon, from purging and vomiting; saw her at 8 p.m.; cold cheeks and extremities; blueness begun in the face, and throwing about her limbs. Gave the 30 grains of tartar emetic as usual; had bilious vomiting, and after it ℥ij of spirit; in a few hours heat of the face improved; had irritable stomach for 24 hours; got over by keeping the stomach empty for six or eight hours; had another dose of calomel of ℈ij on the 23d, and afterwards infus. sennæ; feet did not regain their heat till 24th. Symptoms as in Cloke; during recovery, mouth sore.

Aug. 23. Ambrose Jeffrey, aged 42, at Landrake. Purging began at five a.m.; went one mile to his work; found himself so weak, he returned; neighbours remarked his illness by his looks; he therefore began to take the ant. tart. at 10 a.m. About noon found he had bilious vomiting; face cold; pulse as weak as in those who had died; voice quite gone; body sweating; gave ℥iv rum and the calomel; in a few hours heat better. On the 25th had strangury; calomel twice repeated. In his recovery, for seven or eight days like the former.

Aug. 26. Thos. Steell, aged 40, in Landrake. Had taken the antimony, and had had bilious vomiting. When I saw him, hands and face cold; pulse weak; gave ℥iij rum, and in two hours heat improved; had ℈iiss calomel. Was able to come down in four days, and went a hunting within the week.

Aug. 28. Boy Hoskins, aged eleven, in St. Stephens. Found by his father between seven and eight p.m. stretched on the bed where he had been alone, vomiting and purging all the afternoon. Had ant. tart. gr. iiss every twelve minutes to six doses, and ℈ij of calomel same night. Did not see him for twenty-four hours, having gone to Devonport with the hopes of seeing some one ill there, so that my medical brethren might be assured of the good effects of the treatment as well as myself. Coolness still present; sickness continuing; ordered stomach to be kept empty; went on to recovery like the others; had cal. ℈iiss repeated three times, and infus. sennæ; gums a little affected. Mr. T. V. Whidborne, surgeon, of Saltash, to whom I feel much obliged on the present, as well as on many other occasions, saw this boy several times during his confinement.

About this time I had two others, each about fifty years old, in St. Stephens, who were both cold, having had running bowels for five or six hours, and both died.

Sept. 16. Widow Pearce, aged 75, in Saltash, was taken with vomiting and purging on the 14th; had the urine-like looking stools; tip of nose cold; cheeks cool. The ant. tart. was well borne; indeed it seemed to make no difference to her; it did not cause bilious vomiting, and she died. Mr. Whidborne saw her also with me.

Here are eight fatal cases all under avoidable circumstances, but showing how little time must be lost to avoid death; and here are five cases which show in what state of the disease they may still have recovery.

In about fifty other cases where the characteristic discharges were ascertained to be present, either from the account of the patient or attendant, or from seeing it myself, where it had not been thrown away, or where the disease was clearly marked by the sunken eye, shrunken face, and weakened body, the same treatment was *always* attended with quick recovery, never keeping their bed more than a day or two, and following their usual labour within the week.

In far many more cases of the warning kind, by similar treatment all the symptoms directly disappear, and never in any one of them have any choleric discharges since occurred. These generally return to their labour in a day or two. In many others, the medicines have been taken without my ever seeing the patient at all; and I have thus used antim. tart. ℈ij within these two months.

Summary.

1st. All will recover when watery discharges are present, if they use the means

before the cheeks become cold from exhausting discharges.

2nd. The warming disposition is not followed by attack where similar means are used.

3rd. No febrile state or re-action ever follows patients so treated. In haste to leave, I remain, Sir, yours obediently,

NICHOLAS LITTLETON, Surg.
Saltash, Cornwall.

London, Sept. 22nd, 1832.

[Since the foregoing letter was written, Mr. Littleton has addressed a letter on the same subject to the Central Board of Health, from which the following is extracted]:—

Since my return home from London, I have had more cases of cholera, and have *always* succeeded, as before, where the cheeks were not cold. Have had one case with cold cheeks, which I will give more at large.

Mary Anne Easton, aged 13. Saw her at six a.m., five hours after her first choleric purging; cheeks and extremities cold; pulse barely perceptible in the left wrist, and in the right wrist not to be felt. Gave her ant. tart. gr. iv; before twelve minutes had elapsed she vomited; then gave her *four* grains more, and in twelve minutes four grs. more; before there was time for another dose, she vomited again. Again she kept down two four-grain doses, and again vomited, but not bilious; therefore gave again two four-grain doses, and left her before she had again vomited. Ordered as much cold water to be given as could be got down, which she greedily took. Saw her again about ten a.m.; had vomited the cold water for about two hours after leaving her, but nothing bilious. After this time she kept all down; gave her fifty grains of calomel, and continued the cold water. At three p.m., cheeks and hands warm enough, and the attendants said she had been warmer nearly an hour; pulse perceptible in the right, and stronger in the left wrist, and they said she had had black discharges from the bowels. To have gruel, if she will take it willingly, otherwise cold water, as much as she will swallow, which, to save her the fatigue of raising herself in bed, had all along been given to her out of a teapot. At five p.m., coldness had returned; continued to drink freely. At seven p.m. could scarcely swallow; the cold water ran out at the corners of the mouth. At nine she died. The bed was completely soaked with the discharges.

NICHOLAS LITTLETON.
Saltash, Cornwall, Oct. 10, 1832.

CASE OF

MALIGNANT CHOLERA

TREATED IN THE COLLAPSE STAGE WITH

COLD WATER.

By JOSEPH WILSON, Esq. *M.R.C.S.L., &c. Whitehaven.*

W. BROWN, ætat. 28, sailor, residing in Windmill Brow, a strong, healthy, and muscular man, was seized on the 21st ult. at ten p.m. with severe purging during the night; vomiting and cramps supervened. Saw him at nine a.m. the following morning, and treated him during the day with calomel and opium, bleeding, mustard cataplasms, and frictions. Notwithstanding these means, he gradually became worse. At ten p.m. Mr. Brett, a gentleman of considerable experience in this disease, called upon me, stating that he had seen my patient, and found him in a state of complete collapse, and that the impression upon his mind was, that all remedies would be useless. I visited him immediately, and found him as described by Mr. Brett; countenance sunk, and face of a purple hue; eyes sunk and turned upwards; pulse imperceptible; fingers remarkably shrivelled, and of a leaden hue; the surface universally cold, and bedewed with a cold clammy sweat; upon this I determined to give him cold water in the manner recommended by Dr. Shute. Accordingly, I ordered his attendants to allow him the unrestrained use of that fluid during the night, and even, as it were, to force it upon him if necessary.

23. Seven a.m. Pulse slightly perceptible; purging and cramps continue, but are less severe.

Afternoon. Pulse improving, 92; surface warm and moist, with the exception of the extremities.

Evening. Reaction progressive; pulse 90, moderately full; extremities warm.

24. Much the same as yesterday.

25. Eight a.m. The water rejected is a little tinged with bile; has passed two bilious stools, and a little high-coloured urine, the first for the last 60 hours.

Eleven p.m. Pulse 90, rather strong; tongue loaded with a thick-white fur; the desire for water extinguished. Has now drunk upwards of seventeen gallons, the greatest part of which, of course, has again been rejected.

26. From this time he may be considered as having passed into the fever stage, which has been severe and protracted; the treatment it is unnecessary to detail; he is now, however, well, with the exception of a little debility.

During my attendance upon this patient, I treated a little girl, eight years of age, in a similar manner, and with the same happy result; but in this there was little or no subsequent fever, whilst in the case of the sailor it was, as I have mentioned, protracted and severe.

Whitehaven, Oct. 13, 1832.

MALIGNANT CHOLERA

SUCCESSFULLY TREATED WITH TINCTURE OF THE MURIATE OF IRON.

To the Editor of THE LANCET.

SIR,—I am not aware, nor do I think, that the malignant cholera has ever been treated by the tr. ferri muriatis, and as several cases which have been treated by it have been cured, it is both reasonable and desirable that it should have a further trial. The disease at Sheerness has been as severe, and the cases as numerous in proportion to the population, as in most towns in England. The successfully treated cases were witnessed by Dr. Warden, of H. M. Dock Yard, Mr. Warde, surgeon, and Mr. Wright, surgeon, who agreed with me that they were legitimate cases of Asiatic cholera. Five out of the six I did not see until the collapsed stage came on; but the first case, in which it was tried, was attended to at the onset of the disease. This patient was placed under my care by Dr. Warden; his name is Baker, and the relation of his case will suffice for the whole.

Four p.m.:—

℞ *Sodæ carbon.* ʒi;
Pulv. aromat. gr. vi, *sit pulvis, secundis horis, in cyatho aquæ menthæ piperitæ sumendus.*

Five p.m.:—

℞ *Tr. ferri mur.* ʒj;
Aquæ puræ ʒvi. *Misce, cochlearia duo, secundâ quâque horâ.*

℞ *Acid sulphur.* ʒi;
Ol. olivæ ʒiss. *Misce fiat linimentum quorum fricetur pars affecta donec abierit spasmus.* Capiat cochlearia duo ampla aquæ menthæ piperitæ pro re nata.*

I am not disposed to attribute the virtue of the soda to its saline properties by absorption, inasmuch as the absorbents must be in an ill condition for such nice action, amidst such a profundity of morbid derangement; but as all fruits and vegetables, when brought into a proper temperature, will, at all times, and more especially at this particular season of the year, run speedily into a state of acetous fermentation, and as such I conceive to be the exciting cause in eight cases out of ten, so the good effects are consequent upon its neutralizing powers. The object in view, when administering the tr. ferri mur. is to constringe the open-mouthed vessels, and to act as a diuretic, which it speedily does, and as it is given alternately with doses of soda, the slight* decomposition is productive of no ill effects. Mustard poultices and brandy I dispense with if possible, the former in consequence of their being torturing, and generally unnecessary when the above liniment is actively employed; and the latter, because the attack always terminates in a very severe fever, which is influenced greatly by the quantity of stimulus administered during the stage of collapse, but which fever readily gives way to the ordinary treatment of typhus. I am, Sir,

Your obedient servant,

Oct. 1832. J. R. HANCORN, Surg.,
Sheerness.

P.S. It is pleasing to observe each evacuation diminish in quantity, according to the number of doses of the astringent mixture given. In one case, the mixture having been discontinued, the evacuations having previously ceased, they returned, but on the astringent being again had recourse to, they were again arrested.

* Dr. Warden had administered a dose of cajeput oil, and caused some to be rubbed on the abdomen.

TREATMENT OF THE

MALIGNANT CHOLERA,

By HENRY PENNECK, *M.D. Penzance.*†

MERCURIAL FUMIGATIONS, &c.—BANDAGING THE ABDOMEN—DRAWING THE MILK OF A CHOLERA* PATIENT BY THE MOUTH.

To the Secretary of the CENTRAL BOARD OF HEALTH.

SIR,—Nearly twelve months since, I published an essay, in which, though I had not then seen the disease, I ventured to recommend, in severe cases, bleeding from the head, by dividing the scalp, together with mercurial fumigations, conceiving that a small bleeding almost from the brain itself might render a larger bleeding from the system, generally, unnecessary; and this appeared an object of importance, as the disease so often occurred in debilitated subjects. I tried this method in a very severe stage of collapse; but as the patient died (though I have no reason to think from that cause), and as another gentleman

* It changes the evacuated fluid black.
† Communicated by the Central Board of Health.

did the same with a similar result, I have not repeated it. I have used mercurial fumigation in twelve of the severest cases, of which eight recovered and four died. Eleven of these cases occurred at Newlyn. At Penzance, Richard Gendall (the other case), ætat. 66, has nearly recovered. I also bandaged Richard Gendall in the manner I shall describe. I have found that my fumigating machine has all the effect of a hot-air bath; and when the oxide of mercury is not used, it may be employed as such without expense, by merely heating the irons.

With respect to what has been called the saline treatment, I must remark, that some trial of it has not enabled me to discover its advantages.*

Some practitioners, by a shorter road, to avoid the difficulty of getting saline solutions absorbed from the stomach, have injected them into the veins in larger quantities than all the blood in the body. This practice I have not witnessed, but, according to the published reports, the saline fluid has been discharged into the stomach and bowels almost as fast as injected. This method may be compared to an attempt to fill a leaky cask without first taking the precaution to stop the leaks. I have, however, reason to suppose the leaks may be stopped at a more early period, the profuse discharge from the exhalents prevented, the morbid action of the stomach and bowels restrained, and the patient thus placed in a state of safety. Acting on a principle well known to accoucheurs, I have bandaged the whole of the abdomen in the following manner. After having first applied a poultice made with flour of mustard and hot water only, I have laid some folds of flannel several inches thick on the abdomen, and over them a piece of thin board, about four inches wide and of sufficient length to extend from over the region of the stomach to the pubis, and have then swathed the patient very firmly with a wide calico bandage, and when the poultice is taken off within the space of an hour, and the patient freed from the mustard, I have immediately laid a linen over the part, and reapplied the bandage and board, and kept them on for twenty-four hours. This, I presume, checks the activity of the exhalents by compressing the blood-vessels, stimulates the absorbents, and contracts the peristaltic motion of the intestines. The result has been most satisfactory; it has quieted the stomach and bowels, which being no longer exhausted by their morbid action, and preserved in a state of rest, soon become capable of assimilating mild fluids. Let this be contrasted with the dangerous expedient of injecting foreign substances into the veins! The following cases will show the advantage of this method.

Since September 20th, I have bandaged with the best effect:—

At Penzance.

Grace Wakeford, ætat. 53, severe,
Hester Sampson, ætat. 18, milder.
Walter Pender, ætat. 36, milder.
Joseph Grose, ætat. 18, severe.
Richard Gendall, ætat. 66, a very severe blue case; vomiting, purging, cramps, suppression of urine, very cold, pulse nearly gone,—the man before mentioned as fumigated—his mouth sore.

At Newlyn.

Lavinia Wilkins, ætat. 27, more severe.
Mary Beckerly, ætat. 66, severe.
Samuel Payne's child, ætat. 10, milder.
James Payne's child, ætat. 5, mild.
Richard Payne, ætat. 30, mild.
R. Kuywin's wife, 59, mild.
September 4th. All recovered.

By thus covering the whole of the abdomen, I have deprived myself of so much surface for the absorption of the mercurial fumigation. This I have compensated by first stimulating by mustard other parts of the surface of the body or limbs, and then directing the mercurial fumes on them so as to render the absorption rapid as before.

With respect to other methods, I generally, if the state of the patient will admit it, commence with a small bleeding, and sometimes, if the stomach seems loaded, I give a gentle emetic of ipecacuanha. When the disease is in the form of bilious diarrhœa, I never use mercurial fumigation. When it occurs with rice gruelly discharges, it generally has yielded to small bleeding, mustard cataplasm, hydrargyrus cum cret. with opium, or cal. and op. internally, and occasionally a small quantity of starch with laudanum in an enema, or an opiate suppository, and more surely, of late, with the addition of bandaging.

In the stage of collapse, I have used, as stated before, the mercurial fumigation in addition to other remedies; and I should also recommend the same, if collapse is threatening. In one case (the second I reported), which ran its course in a very

* If the cause of cholera be the irritation of a poison acting on the brain and nerves, as I have supposed, its immediate effect seems to be the inordinate action of the exhalents, shown by the serous discharges from the stomach and bowels, and cold sweats from the skin, while there is an evident torpor of the absorbents, proved by the large quantities of calomel thrown into the stomach, which have been found undissolved and unabsorbed. If then the blood is deprived of its saline parts, and the absorbents are unable to take them up when contained in the stomach and bowels, I cannot conceive how any solution of the compound salts can ever get into the blood through the same absorbents.

few hours, I attempted mercurial frictions without success.*

Since I began the practice of tight bandage, I have observed that Mr. Bowden used it in one case. But as I can find no other notice of it, and have used it in so many cases, and in conjunction with other remedies, I do not think it proper to withhold my claim to its discovery, and my experience of its success.

I am desirous of calling the attention of the Central Board to an interesting fact, which appears to me of some pathological importance. One of the eleven cases mentioned in an early part of this paper, John Kaliski's wife, was very severe; besides vomiting, purging, and cramp, she was nearly pulseless and becoming blue, with suppression of urine. She was a nurse, and when reaction occurred, there was much determination to the head, stomach, and mammæ, so that it became necessary to have her milk taken off. As no glasses could be procured in Newlyn, I thought it right to state to those present the facts of medical men having drunk the black vomit in yellow fever, &c., without any fatal consequences, and to urge some one to suck her. I said to her husband, "If she were my wife I would not hesitate an instant, but suck her myself." I failed, however, to screw up his courage to the point, and the women stood aghast, except one poor woman, Mary Wilkins, who volunteered to suck her, and did so repeatedly when it was required. This fact becomes more interesting when it is contrasted with another. During the last week, the wife of William Smith (Penzance), still under the consecutive fever, allowed her infant to suck her. The child was taken ill the next day, and died the third day after. I was not called to the child. The important difference between the two cases seems to have been this,—Wilkins spat out the milk; the child of course swallowed it. I mentioned the heroic act of Mary Wilkins to some ladies, and a small subscription has been raised for her. After this exploit, she became a nurse for cholera patients, and deserves great credit for the valuable assistance she has rendered her neighbours, being the only really effective nurse, indeed the only nurse, in the place, where nearly fifty persons have died in a population of somewhat more than 2,030. For those duties she has been paid 3s. PER WEEK! I would strongly recommend her as highly deserving of a public reward.

Penzance, Oct. 2d, 1832.

* I consider all the forms as modifications of the same disease, when arising in a situation which the pestilential contagion may reach, and the slightest liable to pass into the most severe, if neglected. I therefore recommend the bed in all, and tight bandaging if it does not cease very quickly.

TREATMENT OF THE

MALIGNANT CHOLERA

IN THE

PARISH OF ST. LUKE, MIDDLESEX.*

By Thos. F. Rance, *Esq., Surgeon, Finsbury.*

CALOMEL AND OPIUM—SALINES—VENOUS INJECTION.

In replying to the inquiries of the Central Board, it may be proper to refer to the circumstances which have afforded me opportunities of acquiring knowledge, in the treatment of the prevailing epidemic. As one of the medical officers of St. Luke's parish, the care of the health of the inmates of the workhouse was confided to me. In this establishment the malignant cholera first made its appearance, fourteen or fifteen cases occurring before a single case was heard of in any other part of this populous parish. It being generally admitted by the profession to be epidemic, the circumstance of its locality impressed my mind that it might occasionally be endemic. In this opinion I am the more fully confirmed, by the disease having been chiefly confined to a particular district, taking a square, bounded on the east by Bunhill-row, the west by Goswell-street, the south by Chiswell-street, Barbican, and Beech-street, and on the north by Old-street. It is true there have been several cases out of the above boundaries, but these have been isolated, a single one now and then occurring in some other district. Attending professionally another institution in this parish, the City of London Lying-in Hospital, I am happy to report that this establishment has not been visited with a single case of cholera.

In taking a general view of the state of the health in the parish, I feel pleasure in saying, that with the exception of the prevailing epidemic and common diarrhœa, I have found less of other classes of diseases than usual. These remarks will apply to fevers of the typhoid kind. There is a detached building in the workhouse for the reception of these cases, from the number of patients we have been obliged to receive. I have had frequently to regret its crowded state. From the extraordinary diminution in the number of fever cases, we have had but few admissions within the last six months, and what is still more remarkable, we have not for the last fortnight had a single case. The nurses are removed, the wards are closed, and the doors are locked.

* Communicated by the Central Board of Health.

On the 25th of February last, I was desired to attend the first patient attacked with malignant cholera in St. Luke's parish, that of a woman, aged 64, the nurse of the lying-in ward, named Elizabeth Ward. She not having been out of the house for above two months, no source of contagion could be traced. She was of a spare habit, and rather emaciated; she had been previously much fatigued by her attendance upon a parturient patient in convulsions. I may here observe, that I had previously been a little sceptical with regard to the truth of the reports of the metropolis being visited with the Indian cholera; but from the description of the symptoms which I had read, I was fully convinced that this woman was afflicted with this malady.

When called to her she had sunk into a complete state of collapse. Sixty minims of laudanum were immediately given, and in half an hour five grains of calomel and two of opium; and in an hour the same quantity of opium and calomel repeated. Smaller doses were continued at more distant intervals; she drank freely of brandy-and-water; bottles filled with hot water were placed along her extremities and to her trunk. She remained in this state for nearly thirty-six hours before the pulsation at the wrist could be felt; the heat of the body began gradually to return, the vomiting was less frequent, and in about forty-eight hours she evacuated a green fluid, containing a considerable quantity of bile. From this time she began rapidly to recover, and in the course of a week was completely restored to health.

Four days after, on the 29th, two men were seized at the same time in Ward No. 13, in the case of neither of whom could the exposure to any infection be discovered; they were treated with calomel and opium as in the former case; attempts were made to draw blood, which was dark and thick, and but little could be abstracted; mustard poultices were laid upon the upper part of the abdomen and to the feet; these cases very rapidly sunk. Almost every day one or two of the inmates of the workhouse were attacked with the disease in its most severe form, seldom affecting successively more than three in the same ward, chiefly persons of broken-down constitutions or aged individuals. Although I have seen children affected with cholera, yet the children residing in the house (nearly I believe 200 in number) have been perfectly free from the disease. The majority of the cases in the workhouse have been aged persons, many of whom have appeared to die with apoplectic symptoms, although not the smallest quantity of opium, or any other narcotic, had been administered.

In the 55 cases that have been under my immediate care, and in upwards of 100 that I have visited with professional friends, with very few exceptions, the evacuations from the intestines have been wholly destitute of the biliary secretion. In proceeding to give some account of the treatment, I shall not distinguish the method adopted in the rice-water evacuations from the state of collapse, as nearly every case that I visited was in the latter stage of the disease.

I would first remark, from the non-appearance of any bilious tinge in the evacuations, and the result of the post-mortem examinations (may we not conclude), that in this disease the passage of the bile must almost invariably be obstructed through the gall duct—if so, is not the procuring a flow of bile to be considered as a *sine qua non* in the restoration of the patient? I think that much of the good effects reported to have arisen from the use of mercurials, is to be attributed to its action on the biliary apparatus. I am willing to admit that in my own practice I have derived benefit from its administration, yet must candidly acknowledge in the majority of cases it has failed me in its anticipated success. Opium I have found beneficial in allaying the spasmodic symptoms: I have almost invariably given it in combination with calomel, but from the frequent tendency to a termination in apoplectic symptoms, I have been deterred from its frequent exhibition. As an emetic I should prefer the mustard, and think I have found it advantageous, externally, in the form of cataplasm to the abdomen, extremities, and sometimes along the line of the vertebræ.

I have endeavoured to abstract blood in a few cases, but soon relinquished it, as I never found any good to arise from it, and it always was with the greatest difficulty that it could be squeezed out of the vessels, which was small in quantity, thick in quality, and very dark in colour. The hot-air bath has been tried, but from the general prejudice against it I have desisted from continuing it, and the more especially because I consider that great benefit was derived from the use of tins, filled with hot water, to the sides and extremities of the patient. As a common beverage, we at first were in the habit of very frequently giving hot brandy-and-water. As we thought that the patients did better who had no ardent spirits given them, we have discontinued it. I would mention the case of a man who was purging the usual kind of evacuations, sinking into a state of collapse with feeble pulse, vomiting, and distressing cramps; I gave him a draught composed of two drachms of powdered ginger, with half a drachm of super-carbonate of soda, in the course of two hours the vomiting ceased, the spasms were allayed, his pulse

rose, and in a few hours he seemed perfectly recovered. I attribute the success in this case to the very short period that had elapsed from the commencement of the attack, and the administration of the remedy. I have lately visited a house for the reception of insane persons at Peckham, in Surrey, where several of our parochial lunatics are confined. I was informed that, in the course of a fortnight, 45 persons had been attacked with cholera; that of those 31 died. It was stated to me that every kind of treatment failed, but calomel, which was first given in large doses, and afterwards repeated in smaller quantities, most of the cases in which it was thus exhibited had recovered. I understand that many large establishments for the reception of this class of unfortunate persons have been visited with the epidemic to an alarming extent, and with considerable fatality; from inquiry I am happy to be informed, that St. Luke's Hospital, situated in this parish, has been entirely free from the visitation.

The last remedy for cholera that I shall notice, is the saline, as recommended by Dr. Stevens; our attention was directed to its use by the reported success of the cases at the House of Correction for the county of Middlesex; the salutary effects at the first administration were not equal to the extent we had anticipated. Since our personal interview with the Doctor, he has kindly furnished us with more minute particulars of his plan. Dr. Cambridge (the medical gentleman appointed by our local board of health to the care of the cholera patients of this parish) with myself, has seen in a large number of cases its exhibition attended with the happiest results, not only in the rice-water evacuations, but also in the stage of collapse. From what I have witnessed, it is but justice to Dr. Stevens to acknowledge, that I place more reliance upon the saline treatment than any other that has yet been recommended; we have given it internally, and applied it externally by means of flannel moistened in a hot saturated solution. Much has been written by some in favour of, and by others in opposition to, the transfusion of the saline fluid in the stage of collapse. I will give the result of the cases in which it has been injected into the veins of the patients under our care. It has been used five times; in one case apparently without any benefit, in another, slight reaction was produced, but the patient soon expired. In two cases reaction was almost immediately produced, and the patients eventually recovered. Dr. Cambridge concurred with me in opinion, that but for the transfusion, these cases, according to our experience of the disease, would have terminated fatally. The fifth and last case was that of a woman aged 84 years; slight reaction occurred, the injection was repeated in six hours; the woman sunk in about four hours after the last operation. The cases which were recovered by the plan, were two young men about twenty-five years of age; those that died were advanced in life, the one being above sixty, one above seventy, and the other above eighty years, as before stated. The conclusion I draw from my own experience is, that in young or middle-aged persons of previous good constitution, and in the early stage of collapse, the tranfusion is very likely to be successful.

In answer to the queries respecting bilious diarrhœa, I would here observe, I have never denominated any as of the prevailing epidemic, except the alvine evacuations were of the rice-water character; the cases of common diarrhœa have for the last six months been exceedingly numerous. In every case it has been checked by simple remedies, as a little rhubarb combined with an aromatic, a mixture of cordial confection, or the chalk mixture; where the purging has been accompanied with pain, a few minims of laudanum have invariably given relief. With regard to the treatment of bilious diarrhœa, I have been called to several cases during the latter part of the summer and commencement of the autumn, these have occurred chiefly in my private practice, and many of them have been severe. I am happy to report, that they have in every instance terminated favourably. The medicines I have exhibited have been occasional doses of calomel, about five grains, sometimes combining it with half a grain to a grain of opium, and this succeeded with a purgative, generally a large dose of powdered rhubarb, as bilious vomiting was present in every case, and considerable febrile action, I gave the carbonate of soda and tartaric acid in the state of effervescence, with a predominance of the alkali.

Supposing that the Central Board might wish for some history of the disease from its commencement to the present period, I have incorporated it with my own opinions and treatment in reply to their circular. The intelligence that this wasting pestilence is arrested, must be agreeable to every philanthropic mind, no new case having been reported in this parish during the past week, and no account of any death from the epidemic during the last fortnight.

THOMAS F. RANCE.

4, City Road, Finsbury Square,
Sept. 29, 1832.

MALIGNANT CHOLERA.

BLEEDING.—COLD SALT AND WATER IN GALLONS.—MERCURIAL FRICTIONS, &c.

In reply to the request of the Central Board of Health, for a short account of the treatment of cholera, I beg to state that bleeding was found to be most beneficial in *all cases*, where I was called sufficiently early to adopt it, that is, before the stage of collapse, and that it was decidedly injurious after. * * *

In real cases of what is called cholera, where there was vomiting of watery fluid like *cold chicken broth*, and evacuations of the very same appearance, neither feculent or bilious, after bleeding, an ounce of muriate of soda in a tumbler of hot water, as an emetic, then a teaspoonful of salt in a tumbler of cold water, to be drunk as often and as freely as the patient chooses, with the saline effervescents, lime-water and milk, and toast-and-water; a solution of isinglass per anum, frequently, with 20 or 30 drops tr. opii in it. It is astonishing how much toast and water and cold salt and water was taken by some of them; three or four gallons in a night were taken and rejected; but I found those who drank most salt and water began to have a yellowish tinge of bile in the evacuations sooner than the others. I thought the lime-water, two parts, with one part *boiled* milk, mixed, did good, particularly with children; in all these cases the liniment. hydrarg. fort. was well and assiduously rubbed in; and where the mouth was quickly made sore, they generally began to mend rapidly. In the stage of collapse I found blankets, flannel bandages, bottles of hot water, flat bags of hot salt, friction, counter extension where there was spasmodic contraction, and free ventilation, of great use; the mercurial friction was kept up, the salt-and-water and toast-and-water were continued; isinglass in solution, with a little brandy and tr. opii, was injected, and cataplasms of mustard and spt. terebinth. were applied all along the spine, over the chest and abdomen, and to the feet; but I did not think any external application of much use in this state.

In a few cases of *bilious diarrhœa*, I gave the nitrous acid mixture, with tr. opii, as recommended by Dr. Hope of Chatham; I thought it did good, but in cases of real cholera it entirely failed with me. Opium, brandy, cajeput oil, and all stimulants, hurried on the blue stage; calomel did no good. The disease should be called "spasmodic asphyxia."

William Collyns, M.R.C.S.

Kentor, near Exeter, Oct. 3rd, 1832.

LETTER FROM DR. GILLKREST

RESPECTING SOME STATEMENTS IN THE

PAPER OF MR. ORTON,

At Page 43, No. 475.

To the Editor of The Lancet.

Sir,—In the number of your journal for the 6th inst, there is a letter from Mr. Orton, in which reference is made to me in respect to a person who died of cholera in the Military Cholera Hospital, in Regent-street, Vauxhall-road, the man having *first felt unwell*, as is stated, *while rubbing a cholera patient*. Most disagreeable indeed it is to me, when thus called upon by a gentleman with whom I have always been on the best terms, to be obliged to say that I felt perfectly astounded by the manner in which the circumstances connected with the above case have been sent forth to the public; and your readers will probably not be less astonished than I have been, when they peruse the following statement.

On the 6th of August last, I was informed that a case, incontestably proving the contagious nature of cholera, had at last occurred under Mr. Orton, as his steward, or hospital-sergeant, had been attacked with the disease immediately after rubbing a patient. Well aware, from long experience, of the necessity of inquiring into such matters a little more closely, I gladly availed myself of the permission of Mr. Orton, whom I saw immediately after, to accompany him to his hospital, a distance of about a mile and a half. On setting out, Mr. Orton said that "as it was but fair to state both sides of a question," he must admit that the man, contrary to his usual habits, had been drinking beer,—a circumstance which I observe has been forgotten by Mr. Orton in his letter, though considered at the time, it would appear, as of importance enough to be noticed; for who will deny importance even to trifling deviations from the usual mode of living, during an epidemic influence? Indeed I feel warranted in concluding that Mr. Orton's details bear strong marks of having been hastily drawn up; for otherwise, I am sure, from my knowledge of this gentleman, that another circumstance, perhaps of still more importance, would not have been omitted,—the age of the man, which was *sixty-five*. I certainly expected that, on my arrival at the hospital, I should have found a stout sergeant of a regiment labouring under an attack; and I was not a little surprised to find that our patient was a worn-out *Chelsea pensioner*, who, though at forlorn hopes enough in his day, had still, it appeared, gallantry enough left not to object to the contagionists' for-

lorn hope,—the duty of a cholera hospital.

I may be allowed to digress here, for a moment, in order to mention, as one of the many proofs of the absurdity of those descriptions of *the true* cholera, deemed "*graphic*," that in the above man's case, the pulse was perfectly natural, and the heat of skin not remarkably reduced, although in other respects some most characteristic symptoms presented themselves.

Relative to the period when this man "first felt unwell," and from which Mr. Orton thinks he is justified in drawing conclusions important to science, as it seemed to cost the patient much exertion to express himself when I saw him, I forbore questioning him too closely, and referred to the nurse of the hospital for information as to his habits, the precise time at which he first complained, &c., and was told by her that he had complained of being ill *early in the morning* of the 4th of August. On hearing this I begged of Mr. Orton to accompany me again to the bed-side of the patient, for the purpose of asking him a single question, when the man admitted that he had been unwell on *the morning* of the day just mentioned. So altered did Mr. Orton's views become, on this avowal, as well as probably from the great quantity of undigested, *unmasticated*, food which we saw had been vomited up, that *he admitted, on the spot, that the circumstances connected with the case wore a different aspect.* If any fresh reasons occurred to induce Mr. Orton to return to his original opinion of the matter, he certainly never did me the favour to state what those reasons were, at any of the subsequent interviews which I had with him previous to his leaving London.

As some of your readers may agree with Mr. Orton in attaching great importance to the periods at which the above man became first indisposed, I beg leave to subjoin a copy of a certificate, signed by a gentleman who happened to be present when the nurse of the Cholera Hospital lately in that gentleman's charge, called upon me for the purpose of restating what she knew upon the subject:—

"London, October 8th, 1832.

"Ellenor Irwin, nurse at the Cholera Hospital in Regent-street, Vauxhall-road, has this morning declared to Dr. Gillkrest, in my presence, that Thomas Bray, a Chelsea pensioner, acting formerly as hospital sergeant, complained to her of being ill early in the morning of the 4th of August last, being some hours before the admission of John Lyons, of the Coldstream Guards, on that day.

"JAMES GLISSON,
Licentiate of the Company of Apothecaries."

John Lyons was the name of the man from whom the pensioner was said to have taken the disease, and who, according to Mr. Orton's notes in the hospital-book, was not admitted till *half-past eleven* of the day in question. The nurse, indeed, further declared, in the presence of Mr. Glisson, that Thomas Bray having been at Chelsea, on his private affairs, for a part of the day on which Lyons was received into the hospital, he did not even see the latter for some time after his admission; and she had the strongest belief (although it seems that the pensioner had given Mr. Orton a contrary impression) that she herself was the only person who had rubbed Lyons.

As I saw the other attendant whose case has been referred to by Mr. Orton, I have no hesitation in declaring, as I did at the time to that gentleman, that the poor man who was also a pensioner, was decidedly labouring under a panic; and this the nurse declared, on the morning of the 8th instant, to have been certainly the case, as she "*could hardly get him to go near the sick, or even up-stairs where they were.*" Mr. Orton will, I presume, be the less disposed to doubt that the degree of illness under which this man laboured had been induced by the cause just assigned, when he recollects the very curious details related about the time, by a regimental surgeon, in his presence, not of a worn-out pensioner put out of his regular habits in fifty different ways, but of a soldier in the full vigour of youth, and belonging to one of the finest regiments in the world, *having been taken suddenly and very alarmingly ill, on reading in a new newspaper some distressing account of a cholera patient.*

Mr. Orton has openly appealed to me in support of what he has stated respecting his hospital sergeant; a proof, in my mind, sufficient to establish, that, however his memory may have failed, his intentions were pure. It will be admitted, I hope, that when I saw he had been so greatly mistaken, I could not with any propriety remain silent. *Amicus Plato, &c.*

Perhaps I may be allowed, by further reference to Mr. Orton's letter, to touch upon points really of the highest importance to mankind. This gentleman says *such facts* as these, relative to the two pensioners, having passed before his eyes, would alone justify, had he not been previously influenced by the statements of others, his abandonment of his former non-contagious, or, as he calls it, Indian creed. And thus reasons, during the cholera epidemic of 1832 in England, the author of a most excellent work, written some years ago in India; and in which, among many other valuable observations for our guidance, the immunity of attendants on cholera patients, was compared to what it would be in the case of attendants on so many wounded men! Had Mr. Orton given the public, as he so well might have done, the result of inquiries in the army circle to which he

was particularly attached in London, it would be seen how exactly things occurred on the banks of the Thames, as he and so many others told us they occurred on the banks of the Ganges. For, of the military and medical officers in contact with the cholera cases treated in the Tower hospital of the Grenadier Guards since the middle of June last (the time when I first saw cases there), of the many attendants of all classes on cholera patients there, since then, how many have had the disease? *Not one.* Of the several persons of all ranks and classes in attendance for some months on cholera patients in the hospital of the Grenadier Guards in Vauxhall-road, close to Mr. Orton's hospital, how many of those attacked? *Not one.* In the ordinary hospital of the 2nd Life Guards at Knightsbridge, where three fine fellows were obliged to be treated in August last, their cases being too desperate to admit of removal to Mr. Orton's hospital,—how many of the individuals who visited them, or were in constant attendance on them, have been since attacked? *Not one.* NOT ONE *attendant, &c. attacked* in all these instances, according to the result of my inquiries, and I have been at no small pains in endeavouring to ascertain. To expect that, during an epidemic, no attendants on sick should be attacked, independently of the agency of contagion, would be an utter absurdity; but as in the above instances of the Guards, and in a thousand other instances in London, the better the description of persons, and the more of them who are in attendance, the greater will the probability be of their never being attacked in a higher proportion than the average of the community not so employed.

To Mr. Orton and all others of easy faith, several instances could be furnished in the metropolis, not only of tottering pensioners, but of the unfit from dissolute habits, of the delicate and feeble, more needing to be attended upon than able to attend others,—who have, in cholera hospitals, as well as out of them, been attacked with the disease; and I envy not the man who draws such conclusions as Mr. Orton does therefrom.

Mr. Orton had written, while in India, some years ago, a most excellent work on cholera, as before stated; and as his *opinions* now regarding the contagion of cholera may have a baneful influence not only in this country but in others, the data which he furnishes should therefore be subjected to proper tests. I shall not hesitate declaring, on a question of public interest like the present, that Mr. Orton is not in any degree borne out in his assertion as to cholera never having arisen *from other causes than contagion.* Before making so sweeping an assertion, he was bound towards the profession and society to show that this, as he seems to insinuate, was established by observations or inquiries within the circle to which his duties were confined. This however *I am quite sure he could not do*; for having been a good deal among the medical gentlemen whose men were treated in Mr. Orton's hospital, *I could not hear from them that they had traced contagion in a single instance.* As Mr. Orton was present when some of my inquiries upon this point were made, (when, indeed, a surgeon of a regiment said that three men just attacked belonged to three different troops, and that the cause was inexplicable,) I am the more astonished.

But what more extraordinary,—*Quousque tandem!*—than to find Mr. Orton declaring, in the present day, and after so much experience in the families of medical men and others in contact with sick, that he has "likewise seen reason to believe that the disease may be conveyed by persons who are themselves unaffected by it;" and his *reason* is certainly sufficient to make every nervous old lady in the land close her doors against medical men who have been near cholera patients. Mr. Orton (most philosophic reason truly!) found that, while he was attending cholera cases at his hospitals, some people living in the house where he lodged had diarrhœa. The force of this reason will be duly estimated by those who have at all attended to the epidemic influence during some months past, and who are so fully aware that scarcely a family, especially in the line of the river, has escaped attacks of diarrhœa, whether medical men were or were not inmates. A fact so well known (known indeed *et lippis et tonsoribus*), I was rather suprised to find had not been brought forward by Mr. Orton, anxious as he must be *to give both sides of the question*, in order that those people among whom these things have not yet occurred, may have an opportunity of exercising their common sense a little in the question. Mr. Orton's landlady, and some of her children, had certainly a slight indisposition, such precisely as some of her neighbours had, with whom no professional man happened to lodge; and let a fact so *important* therefore stand recorded.

Mr. Orton asks, "Have not a great majority of medical men everywhere experienced the cholerine?" If he means, which I suppose he does, the medical men who have attended to their duty and seen cholera patients, then I can, I think, for London at least, answer,—Not in a greater proportion certainly than that in which others have had an indisposition so called.

It augurs badly for science when we find such men as Mr. Orton labouring, by quot-

ing such places as Bilston and Sligo, to show how much more than others medical men have suffered from cholera. He is, or ought to be, well aware, that in all parts of the world where cholera has yet appeared, the peculiar epidemic influence *which I know this gentleman admits*, is observed to prevail with peculiar intensity at some points; and in such cases it would be as inadmissible to refer the attacks of medical men to the agency of contagion, as it would be, *mutatis mutandis*, in the instance of a malaria street in Rome. At Sligo and Bilston almost all those (*quite all*, according to some) who were in easy circumstances, left those places when the disease exploded so violently, *except the medical men*; nothing more easy, then, to an ingenious person, than to make it appear that medical men, on the winding up of lists, had suffered probably *more* in proportion than that class of society to which they belonged.

Long as this letter is, I trust that you will give it insertion in your journal, as, upon matters of high public importance, vague statements and but indifferent logic, should not be suffered to go forth unnoticed, even though they come from a gentleman for whom I have such a high respect as I have for Mr. Orton. I remain, Sir, your very humble servant,

J. Gillkrest.

London, Oct. 10, 1832.

Traité Pratique, Theorique, et Statistique du Cholera Morbus de Paris, &c. Par J. Bouillaud, Médecin de l'Hôpital de la Pitié, &c. Paris, Bailliere, 1832. 8vo. pp. 426.

Monographie du Cholera Morbus Epidemique de Paris, &c. Par A. N. Gendrin, &c. Paris, Bailliere, 1832. 8vo. pp. 336.

Cholera Morbus de Paris, &c. Par A. F. H. Fabre, M.D. Bailliere, 1832. 12mo. pp. 163.

Some months have elapsed since we promised, that when the fearful epidemic then devastating Paris should have ceased, and when the events of that memorable time should have been duly registered by the able observers of the scene, that our readers should be put in possession of an ample digest of all that had been noted down of the epidemic. In the present article we shall endeavour to redeem that pledge. In the attempt, we possess the advantage at least of having materials before us of the most valuable character; for never, we believe, has a pestilence had more competent historians than MM. Bouillaud and Gendrin, and never, to our knowledge, did histories, so rapidly written, evince more profundity of research, more power of induction, or greater excellence of description, than is demonstrated in every page of the volumes by these distinguished authors.

The work of M. Bouillaud consists of three parts. In the first, which occupies 166 pages, the author describes at great length 50 fatal cases of cholera. This part embraces two sections, one relative to cases of simple cholera, the other to that disease complicated with other affections. Each of these sections is divided into various categories. In the cases of the first category, death supervened in the space of twenty-four hours. The cases of longer duration, but terminating before the appearance of consecutive fever, occupy the second. Finally, the third is devoted to cases terminating fatally during the typhoid period. In the second section of the first part, three categories are comprized, in which, 1st, The cases complicated with abdominal diseases; 2nd, Those with thoracic; and, 3dly, Those with cephalic,—are consecutively arranged and described.

The second part is occupied by general history of the disease. It comprises seven sections; 1st. The causes and mode of propagation of the cholera; 2. Its symptoms; 3. Its anatomical characters; 4. Its nature; 5. Its mode of invasion, its duration, and its end; 6. Its treatment; and 7. Its mortality, and the prognosis to be advanced. The discussion of both these topics is guided by statistical researches.

The third and last part of the volume is composed of the narratives of 32 cases of recovery, arranged under the heads of collapse and typhoid. By this synoptical view of the contents, the reader may perceive, that the author's arrangement is such as to afford him ample scope for generalisation and induction. It has the inestimable advantage of applying the method of analysis to the study of this most heterogeneous disease, and it thus entitles the author's clinical inferences to the serious attention of all those who wish to regard medicine, as something beyond a conjectural and empiric art.

Notwithstanding the value of this arrangement, we yet confess, that from M. Gendrin's book we derive still greater satisfaction. During the epidemic, the author—already well known to literature through his numerous and important publications—was attached to a temporary service in the Hôtel Dieu. In a beautifully-written introduction, M. Gendrin first sketches the circumstances of the awful outbreak of the pestilence, and describes the state of the Hôtel Dieu during the early days of its ravages. He then successively presents the diseases as an object of medical study on individual cases, and as an object for general observation in its epidemic character. To meet these indications he divides his work into nine chapters. In the first he describes the disease; 2nd. The anatomical pathology; 3rd. The prognosis; 4. The nature; 5th. The treatment; the 6th chapter treats of *the modifications presented during the epidemic, and of the intercurrent maladies which occurred at the same period*; in the 7th, the causes are investigated; the 8th relates to the preservative treatment, and to the *measures of public hygeiene suitable to be adopted in places visited by the epidemic, especially in hospitals*; and in the 9th, the author gives a statistical view of the proportional numbers of deaths and recoveries in the sum total of the hospital patients.

The last of the works on our list, is a compendium by the able editor of the *Lancette Francaise*, of the various methods of treatment pursued during the epidemic in Paris, with a succinct description of the disease, and of the methods of treatment followed in several other countries. It is a manual of much practical utility, and reflects credit on the industry of an author already distinguished for an uncompromising spirit and an able pen.

We have premised this brief account of the works of Messrs. Bouillaud, Gendrin, and Fabre, in order that the caterers for libraries may have self-proving evidence of their merit. Neither is the aggregate of their value diminished by the fact, that MM. Gendrin and Bouillaud differ considerably in their views on several subdivisions of their subject. The character of this difference we shall to a certain extent perceive, as we examine and contrast the statements of each author on the invasion, spread, symptoms, treatment, and hygeiene, of the disease. In this analysis we shall pursue M. Gendrin's arrangement, deriving from his volume the chief points on the subsequent epitome, and bringing M. Bouillaud to bear chiefly as a witness ora commentator on M. Gendrin's statements.

The malignant cholera having prevailed in London for several weeks, burst out in Paris towards the end of March 1832. A few cases having been observed in some of the English towns opposite to the French coast, it was expected that the epidemic would only reach the French metropolis by successive stages, but, contrary to this rational anticipation, it broke out, according to M. Gendrin, either simultaneously in Paris and Calais, or even in the former before the latter. Observed for the first time on the 27th of March, 98 deaths had already occurred by the 31st, and by the 9th of April the daily mortality amounted to 860 persons. The epidemic then gradually abated, and by the end of May the first irruption was almost over.

For nearly 20 days previous to this memorable irruption, the weather had been generally fine and dry. On some days, even the mid-day temperature was greater than suited the early season, though during the evenings, nights, and mornings, there blew a strong and chilling wind from the north-east. From the 14th to the 20th of March the wind shifted several times to the north-west, and one night it blew with great violence from that quarter. The days subsequent to this gale were cloudy and damp, showers of rain fell occasionally, with now and then a drift of sleet or hail. M. Gendrin alludes to these meteorological facts in strong and decisive terms. He deems the opinion far from untenable, which attributes the transportation of the malady from England to Paris, to the vehement north-wester which prevailed in the French metropolis for several days antecedent to the explosion. He considers that this general *locomotive* cause, considered with the local or *stationary* influences prevailing in a peculiarly condensed population, sufficiently explanatory of the transportation of the malady over the intermediate towns between London and Paris. Further on in the work, the author alludes pointedly to the import-

ant fact, that at the same season of the year, diarrhœa is invariably *endemic* in Paris; and he with much rationality infers, that to the predisposing influence of this *endemia*, is mainly attributable the awfully rapid extentension of the locomotive migratory epidemic among the population of that city.

By the preceding abstract it may be seen, that M. Gendrin tacitly repudiates the idea of human intercourse having been concerned in the arrival of the cholera in Paris. In the ninth chapter of his work he is still more explicit on this point, and by a series of interesting arguments, contends for the existence of an epidemic cause. Amongst other proofs of this position, he adduces the almost conclusive fact, that on the third day of the epidemic he received, in the Hôtel Dieu, patients from every district of Paris, whose distant residences and opposite professions precluded the possibility of their having derived their disease from human contact. M. Gendrin then alludes to the fact, that all diseases known and proved to be transmitted by contagion exclusively, are communicated slowly and gradually, while in Paris, within the first week of the disease, the mortality reached 500 per diem, and the cases at four times that amount. He cites the circumstance, that the village of Issy, situated on the road from Paris to Versailles, totally escaped, although surrounded by other hamlets, Vanvres, Vaugirard, Beau-Grenelle, &c., all cruelly ravaged by the disease. Amidst other occurrences, the author dwells on this, that during the increase of the cholera, all other diseases participated in its features and exhibited abnormal epiphenomena distinctly of the cholera kind. The strictest seclusion, moreover, afforded no protection. Three prisoners, for example, confined in separate cells and on separate floors of the Conciergerie du Palais were simultaneously attacked. Several other arguments are added, which we need not particularize, but which the author deems amply sufficient to prove, that the disease reached Paris as an epidemic, and was propagated chiefly by epidemic causes. This opinion is the more to be relied on, as M. Gendrin also adduces powerful evidence in proof of the communicability of the disease from man to man. He thus admits, and we think most correctly, the existence of two causes for the dissemination of the malady, and he also recognises the operation of a third cause, or concomitant influence, namely, that of local circumstances. On the last point, his observations and facts are excellent; but we postpone them for a moment, while we examine M. Bouillaud's opinions on the points already noticed.

The foundation of M. Bouillaud's creed, is the admission of a specific cause of *unknown* nature, capable of generating cholera, independently of human contact, and independently of all the known agents which operate upon man. In the bitter contests which have taken place on the question of contagion, it is strange that the necessary fact of the existence of such a cause, should have been so generally overlooked. It is clear, that the *first* individual attacked by cholera at Jessore, could no more have contracted the disease by contagion than the first human being could have sprung from sexual intercourse. That a specific cause, therefore, did once exist capable of producing cholera cannot be denied, and that such a cause continues in existence M. Bouillaud believes. We cannot see on what grounds his opinion can now be disputed.

With regard to the importation of the disease by human intercourse, M. Bouillaud altogether agrees with M. Gendrin in rejecting the opinion. In adopting this decision he is principally influenced by the same motives which operate on M. Gendrin, and he dwells with rather more emphasis on the fact that the vicinity of the only parts of Paris, namely, the Messagerie Royale and the Messagerie Lafitte et Caillard, where strangers arrive, from the places the[n] infected, did not furnish cases until after the epidemic had appeared in other districts. We may state too, of our own knowledge, that no cases occurred, at the commencement of the disease, either at the Hôtel Meurice or the Hôtel de Lille, the two principal resorts of English visitors to the French capital.

Thus much for the nature of the remote *moving* cause, and for the reason of the explosion of the disease in Paris. Let us now examine the opinions of our authors on the secondary or stationary agents which rendered the pestilence so destructive.

M. Bouillaud first adduces errors of diet as favourable in the extreme to the recep-

tion of the remote cause, and he affords numerous examples to prove this opinion. The same has now been observed wherever the cholera has prevailed. M. Bouillaud, however, particularizes excess in spirituous liquors and stimulating food as by far the most dangerous. He also alludes to the mischief occasioned by fruit, cites cases in which the eating of cherries evidently brought on an attack, and he even goes so far as to attribute, in some degree, the second irruption of cholera in Paris to the excesses in the new fruit then first brought to market. The opinions of M. Bouillaud on this point fully coincide with those we had formed from our experience of the disease this summer in London. Of 23 private cases, the attack on 11 supervened in a few hours after eating fruit, and in 5 of the remaining cases, fish (salmon in 2 and mackerel in 3) had been recently eaten. The author then enumerates atmospheric vicissitudes, cold and moisture with stormy weather, crowded population, and narrow and confined apartments, as causes similar in their operation to regimenal errors. Sorrow, fear, venereal excesses, old age and chronic diseases, and the injudicious use of purgative medicines, occur in the same catalogue; and the operation of each of these causes is proved by striking illustrations afforded by the author's personal experience.

Such is the mode in which M. Bouillaud treats this important branch of his subject. We must confess that it is but poorly handled, and dwindles into absolute insignificance when contrasted with the masterly and philosophic disquisition of M. Gendrin on the same subject.

M. Gendrin commences his chapter on the "causes of cholera" by a brief and emphatic admission that the remote or special cause is completely unknown. He then proceeds to the consideration of the secondary or predisposing influences.

The first of these which he recognises, is the agglomeration of inhabitants on the banks of rivers. In Paris a dense population is crowded together in the quarters of the old town on the banks of the Seine, and we find from official tables that the mortality in each arrondissement is great in proportion to the extent of its contact with the river. Thus in the arrondissements contiguous to the Seine, the mortality has been 1 in 37·39 inhabitants; in those immediately contiguous to the river 1 of 95, and in those altogether separated from the river, only 1 in 126·64. M. Gendrin shows that neither the situation of some of the great hospitals, nor the kinds of trades of the inhabitants, nor the character of their dwellings, can prejudice the inference from these numerical data. Thus although the Hôtel Dieu is situated in the ninth arrondissement, on both sides of the river, and though several thousand deaths occurred in that institution, nevertheless the great majority of the patients were brought in from the immediate vicinity of the hospital. Again; with reference to the trades and kind of dwellings of the inhabitants in the third arrondissement, the working population of which is enormous, and the inhabitants heaped together in high, narrow, and dirty houses, but which do not touch on the Seine, the mortality was only 1 in 226·51 persons. In the sixth arrondissement similarly inhabited and situated, 1 in 146·92 persons. On the other hand, in the fourth arrondissement, one quarter of which touches the Seine, the mortality was 1 in 126·01. In the eighth arrondissement, three-quarters of which are close to the river, the mortality was 1 in 52·71. In the ninth arrondissement, similarly situated, 1 in 18·000. Lastly, the airy, spacious, and fashionable Faubourg St. Germain, but of which three-quarters also approximate the river, the mortality was 1 in 35·02.

Another incontestable proof of the evil influence of rivers, is found in the progressive propagation of the disease through all the communes contingent on the Seine, while those situated a little distance almost entirely escaped. Thus the communes of Neuilly, Luresne, St. Cloud, Puteaux, Sevres, and Meudon, were devastated by the pestilence, while the commune of Reuil, situated in the very centre of the places just mentioned, but distant from the river, had only a few cases.

The annual endemic prevalence of diarrhœa in Paris, is further dwelt on as a most potent collateral cause; chronic diseases, especially of the pulmonary organs, are also mentioned; thus, of 19 phthisical patients, in M. Gendrin's wards, twelve died of cholera in a few days. No difference of predisposition seemed to be occasioned by sex;

children were attacked in much smaller proportion than adults, and, indeed, in general, where well fed, and cleanlily kept, children seemed to enjoy an immunity in the midst of the worst ravages of the epidemic. Thus, at the establishment for the daughters of the Legion of Honour at St. Denis, in the centre and lowest part of that town, not a child was attacked, although 200 persons were attacked in the immediate vicinity in a few days, and with symptoms so violent, that scarcely a single patient recovered.

We stated that M. Gendrin admitted, to a certain extent, the influence of the sick in spreading the disease among the healthy. Some of his views are here peculiar. He deems that the proximity to a healthy person of one or more patients, may *predispose* him to be acted on *by the epidemic cause*. According to this notion, a traveller from an infected place, falling ill at another place yet free from the epidemic, cannot be said directly to communicate cholera; but if he goes to a place already infected, he can render his nurses and immediate attendants obnoxious to the poison of the epidemic. We scarcely think this doctrine is at all tenable. Indeed, it seems completely in opposition to several facts in which M. Gendrin professes credence; for example, of single individuals arriving in villages from infected places, then falling ill, and the disease soon after breaking out among the persons who had been in closest contact with the stranger. M. Gendrin even admits that it is frequently possible to trace the disease in this manner among the houses of the relatives and neighbours who visited the first patient.

We may here advantageously remind our readers of the remarkable instance of this kind which occurred at Hawick; of another at East Hendred; and of a third related by Dr. Brault, of Vendome, which we published in the last Number of this Journal. In these three instances, the places where the original patient arrived were free from the epimic, and in these three no cases occurred, except among the families or visitors of the first case. Such evidence is to our minds as conclusive of the communicability of cholera, as if the matter was susceptible of, and had received, mathematical demonstration.

To one of the arguments, however, which M. Gendrin adduces in support of this opinion, we must offer dissent. In alluding to the fact, that of the numerous families attacked, the cases never occurred simultaneously, but at various intervals, he admits that this circumstance tends to prove that the disease spread from the first case. He further states, that this is not the character of exclusively epidemic or endemic diseases, and that it is more the feature of those exclusively contagious. M. Gendrin is here mistaken, as is sufficiently proved by the fact, that if bodies of soldiers are marched past malarious swamps, the marsh fever does not develop itself simultaneously, but the disease first attacks an individual; perhaps after a lapse of three days, the disease then seizes a greater number, and the cases gradually increase daily, for from 14 to 21 days, and then as gradually diminish. A remarkable example of this is related by Dr. George Gregory in the 4th No. of the Cholera Gazette.

We now turn to the "modifications of the first epidemic, and the intercurrent maladies of the time," a topic ably discussed by M. Gendrin, and scarcely, if at all, noticed by Bouillaud.

During the first ten days of the epidemic, M. Gendrin informs us, that the disease was of that awfully rapid type to which the term "*foudroyant*" has been most expressively applied. A terrible illustration of this fact is afforded by the history of the Hôtel Dieu, where, of 98 patients received during the first three days, the extraordinary number of 96 perished. At this time the malady was confined almost exclusively to the poor and dissipated, and *it was marked by a total absence of any premonitory symptoms, such as preliminary diarrhœa*. The epidemic influence was also restricted to the patients absolutely attacked.

But ten days or a fortnight having elapsed, the mode of progress of the epidemic altogether changed. The disease lost much of its *foudroyant* character, premonitory diarrhœa was almost universal, and a decided majority of the whole population of Paris experienced the influence of the mysterious poison. In some this was evidenced by purging, in others by trivial cramps, lassitude, and vertigo. Many complained of excessively chilly and exhausting perspirations; but the majority experienced only a

sensation of abdominal depression, coupled with flatulent rumblings, and indigestion in various forms. In rheumatic patients, an intense increase of muscular pain took place, and in irritable women a feeling of contraction of the limbs was generally complained of. All these anomalous affections were of long duration. Relief having been obtained, relapses were frequent. They varied, in fact, with the changing phases of the epidemic, and almost completely bade defiance to the efforts of medical skill. It is utterly impracticable to follow M. Gendrin any further in his minute and admirable disquisition on this department of his subject. Faithful translation can alone do justice to the merits of the entire chapter.

We must here intermit our analysis for the present. In a fitting state of our columns it shall be resumed, and continued until the interesting works of MM. Bouillaud and Gendrin are fully and satisfactorily examined.

A Critical and Experimental Essay on the Circulation of the Blood; especially as observed in the Minute and Capillary Vessels of the Batrachia and of Fishes. By MARSHALL HALL, M.D., F.R.S.E., M.R.I., M.Z.S., &c. &c. London, Seeley and Burnside, 1832. 8vo. pp. 188. Plates.

THIS volume abounds in original views and observations. The experiments detailed seem to have been conducted with care and judgment; and the conclusions at which the author has arrived, lead us to hope that further investigation will clear away many of the obscurities which at present surround the doctrine of capillary circulation.

After a few preliminary observations on the principles of investigation in physiology, Dr. Hall proceeds at once to examine the anatomy of the minute and capillary vessels. All the descriptions of minute capillary circulation, Dr. Hall observes, are distinguished by numerous inaccuracies. To obviate the cause of these, the author employed the achromatic microscope of Mr. Dolland, and verified every fact by repeated experiment in the presence of competent judges.

In describing the capillary circulation, it is essentially necessary to distinguish the true capillaries from the minute arteries or veins; they are obviously distinct from both; they do not become smaller by subdivision nor larger by conjunction; but they are characterized by continual and successive union and division, whilst they retain a nearly uniform diameter.

To determine whether there was any characteristic difference between the capillary vessels and circulation of the system and of the lung, Dr. Hall examined with the microscope the lung and mesentery of certain batrachian reptiles, and the tail and fin of the stickleback. By plunging the batrachia in water, heated to 120°, he was enabled to suspend all animal sensation and motion, while the circulation went on uninterrupted for several hours, by this ingenious application of a principle first noticed by M. Edwards, all unnecessary suffering was spared, and the observer was enabled to contemplate at leisure "the splendid and interesting scene" of the capillary circulation.

The fin and tail of the stickleback are merely nutatory organs composed of a reflex membrane enclosing numerous vessels. The arteries run along each border of each ray to its extremity, where they are reflected, become venous, and pursue a similar but retrograde course. During its whole course the artery gives origin to capillary vessels few in number, inclosing large spaces and joining the veins. The structure of the frog's foot is more complicated than that of the fin or tail of the fish. The minute arteries are characterized and distinguished from the veins by pursuing a straighter course across the web by their small size, light colour, and rapid circulation; hence they are apt to elude a cursory observer, but by a high magnifying power they are seen to occur in nearly equal numbers with the veins. On inspecting the circulation in the web of the frog, under the microscope, the minute veins first strike the eye; they are large, red, and tortuous, presenting a most distinct view of the flow of blood. In the arteries, a pulsatory movement of the blood is seen quite distinctly, but it does not extend to the blood in the capillaries or veins; this communication of impulse is prevented by a peculiar vascular arrangement to be presently described. Although the author was

unable to detect any anastomosis between the minute arteries, the roots of the veins were seen to communicate and produce the remarkable phenomenon of a double and contrary course in the flow of the blood. The final object of the difference seems to arise from the circumstance, that the circulation in the arteries being rapid and not easily interrupted, does not require the aid of anastomosis; in the veins the circulation is feeble and easily suppressed, an event which is prevented by the institution of cross currents from the venous anastomosing roots. Dr. Hall denies the termination of an artery directly in a vein, and believes that generally, if not invariably, capillary vessels are interposed. This, we may remark, is contrary to the opinion of Haller, and opposed by the microscopical observations of Leeuwenhoeck, Cowper, Baker, and Spallanzani in his beautiful experiments on the circulation of the blood. The transition of the arterial into the capillary vessels has been examined carefully, with every power of the microscope, by Dr. Hall.

"The larger arteries first divide into branches. These subdivide into still smaller branches, which are also successively smaller than the trunk from which they proceed. At length the singular fact is observed, of each of the two branches being as large, or even larger, than the vessel from which they originate. At this point there is an obvious and remarkable change in the appearance of the circulation: the course of the blood becomes of only half its former velocity, and the globules, consequently, instead of moving too rapidly to be seen, become distinctly visible. If the vessel be traced, it is next observed, not to subside, but to unite with other branches, and to pass into that distinct system and net-work of vessels to which I would restrict and appropriate the term capillary. The object of this peculiar distinction and character of the capillary vessels is very obvious: a more diffused and slower circulation is required for administering to the nutrient vessels or functions, than that of the arteries; this peculiar character of the circulation is conferred at once, by the subdivision of the minute artery into branches of equal size with itself."

The arrangement of the pulmonary capillaries is somewhat different from that of the systematic vessels; they have been examined by the author in the salamander, frog, and toad.

The large and minute branches and roots of the arteries and veins are placed in parallel lines close to each other; the division of the minute arteries into capillaries takes place without any of those subdivisions observed in the vessels of the systematic circulation. The final arteries give out and the venous roots receive capillaries not only from their point, but along their sides; and between the terminal points of the arteries and veins, there is a considerable space occupied by innumerable capillaries, which diffuse the globules of blood in straight lines over the pulmonary membrane. There is plainly no disposition to anastomosis between the arteries, or to direct communication between the arteries and veins; but there is an intermediate space occupied by the capillaries, which subdivide, anastomose, and form a net-work of small vessels, by which the globules of blood are exposed over the greatest possible extent of surface to the influence of the air.

The preceding description is applicable only to the lung of the salamander; in the frog and toad the arrangement is merely modified by the combination of cellular with vesicular lung; the capillary circulation is similar in all, and it seems highly probable that the arrangement of minute and capillary vessels so clearly pointed out by the author, is not confined to the batrachia, but may be found applicable to the higher classes of animals.

The second part of this volume is occupied with a consideration of those powers which circulate the blood. We cannot afford space for a critical examination or comparison of the opinions entertained on the one hand by Harvey, Haller, Spallanzani, &c., and refuted with considerable energy by Hunter and Scarpa on the other, or for a review of the more modern doctrines promulgated by Carson, Barry, or Reuss. Dr. Hall supports the opinion, that the influence of the heart extends beyond the arteries, while he conceives that the latter vessels promote the motion of the blood, independent of the heart. We omit the usual arguments on the first of these topics, which are doubtless familiar to every one, rather selecting some illustrations drawn by Dr. Hall from his microscopic observations.

The circulation in the web of the frog is, under natural circumstances, rapid and pulsatory in the arteries, and slow but equable in the capillary and venous systems; but if the circulation be impeded in the slightest degree, the pulsatory movement at each contraction of the heart is seen in all the three systems of vessels. The experiment is rarely made by gently applying a ligature round the limb of a frog, when the pulsatory movement in the vessels of the web is immediately produced, and the mind at once convinced that the heart is capable of moving the blood through the arteries, capillaries, and veins, in the most remote part of the system.

The second topic, or influence of the vessels upon the circulation, has also occupied the author's attention, but we conceive he has been unfortunate in his adoption of the term "muscular action," contractile would have been equally intelligible, and reconciled many contending opinions.

In evidence of the muscular action of arteries, the author adduces the facts of a perfect circulation in acardiac fœtuses and acardiac animals; the manner in which the circulation is carried on in the crustacea and fishes, in the former of which a single heart distributes the blood through the systematic and pulmonary systems, while in the latter the heart influences only the bronchial circulation, and the blood is carried to the body by vessels uniting from the capillaries of the lungs; the effects of a ligature upon the aorta; the anatomical structure of the arteries; and, finally, the effects produced on them by an elevated temperature being similar to the results obtained on the muscular fibre. Dr. Hall, however, acknowledges that all these arguments are indecisive, and rests his belief on the discovery of an artery in the frog and toad, which pulsates independently of the heart—a most curious fact if authenticated by further research.

"The artery to which I allude (says the author), is a branch from each of the arteries which in the frog and toad, after separating at a short distance from the heart, rejoin and form the aorta. Pursuing its course backwards and downwards, it passes under the transverse process of the third vertebra. It is here bound down. It is also very tortuous. When the viscera are removed, two pulsating points are distinctly seen at this part. On a minute examination, these pulsating points are found to be portions of cellular and muscular textures, above and below the transverse process just mentioned, moved by the contraction of a subjacent artery.

"On removing these textures carefully, and on removing the skin from the back of the animal, the part along which the artery passes on emerging from beneath the transverse process, is sufficiently thin and transparent to admit of its being placed under the microscope. The artery is then plainly seen to pulsate, becoming straighter and paler at each contraction. The adjacent textures are moved at the same time, and the blood is frequently seen to oscillate in a branch of the same artery very near it.

"In this fact we have the most, and, I may add, the only, indubitable proof of a contractile action in an artery.

"It is interesting to contrast the appearance of automatic contraction in this artery with that of dilatation, the effect of the impulse of blood sent from the heart, as seen in the principal pulmonary artery in the batrachia. Whilst the former becomes straighter and paler, the latter is rendered still more tortuous, and is still more distended with blood."

The concluding portion of the volume contains remarks on the irritability of the capillaries, and the influence of the central portion of the nervous system upon the circulation, a question which has given rise, we understand, to a war of opinions between the author and Dr. W. Philip. To this part we shall not further allude, being unwilling to have anything to do with a discussion which was more calculated, we are told, from the manner in which it was conducted, on one side at least, to afford amusement than information, to the score or two of elderly Dubs who had an opportunity of seeing it.

We conclude our notice with a description of an organ which is called by Dr. Hall the caudal heart, and discovered by him in the tail of the eel. This is a membranous, transparent bag, placed at the extremity of the eel, and giving off vessels which appear to have a peculiar distribution to the spinal marrow; one in particular ascends along the inferior spinal canal towards the heart. The action of this caudal appendage is quite independent of the pulmonary heart; it beats 160 in the minute, while the latter beats only 60, and soon loses its power of motion after the division of the fish. An organ very similar to this was described several years ago by Professor Jacobson, of Copenhagen.

THE LANCET.

London, Saturday, October 20, 1832.

"KING'S COLLEGE" is a high-sounding title, but pretensions which have no other claims to support than the mere names under which they are ushered before the public, are destined henceforth to sustain but a miserably low station in the opinion of an intelligent community. "*King's* College!" Why, we would ask, was such a title given to the new institution in the Strand, unless it were for the purpose of rendering it the focus of all the old prejudices, which, for so many generations, have darkened the minds of our unimproved—we might say unimprovable—aristocracy? Prejudice, then, at once the parent and the offspring of ignorance, was the grand lever that was employed in the erection of this "King's College." If there be any individuals who have sufficient temerity to question the truth of such an assertion, let those persons refer to the speeches which were delivered by the political archbishops and bishops at the great meeting at Freemasons' Tavern, where the resolutions for establishing the King's College were first proposed and publicly adopted, and when the list of subscribers for shares was first formed. While examining the language which was employed on that occasion, it is the bounden duty of the public not to forget the *period* that was selected for raising up this "new monument to science and literature." And pray when was it? Not until the dirtiest portion of the law-church-and-King faction — the most influential members of the old leaven of the Tory aristocracy—observed with dismay that their misrepresentations, calumnies, sneers, gibes, and cant, had utterly failed to induce the public to withhold support from the undertaking then on foot to found the institution now so well known as the UNIVERSITY OF LONDON. Thus KING'S COLLEGE was not intended to be a sister establishment, to assist in diffusing more brilliantly and more extensively the light which was to emanate from the seat of science and learning in Gower Street, but was devised in the hope of sending forth such clouds of mist and darkness as should partly overshadow, if not entirely overwhelm, the soul-ennobling labours of the sons of genius, science, and literature, then to be for the first time assembled in *one* institution within the bounds of the British metropolis. Murky being its object, dirty was the spot selected for the erection of this "new monument" to perpetuate dogmatism and prejudice.

Strand Lane—the end of Somerset House—the grand focus of corruption, the great engine-house of tyranny, abuse, and misrule—*that* was to be the seat of the new institution, dignified with the title of "King's College." Destined to be the fulminator of clouds of darkness, it was, appropriately enough, fixed in an atmosphere of smoke. In short, in prosecuting such an undertaking, in working such an useful machine of state, no collateral or contingent advantage was to be lost sight of, but every resource of nature and art readily embraced, to bring within the vortex of its influence the objects of merciless intentions, but, thank God, *not* the victims of a successfully-wielded power. The original scheme has failed. KING'S COLLEGE stands now, not the flourishing, but the still-born, child of prejudice; or, if there *be* life and energy evident in any one of its members, the signs of vivification are most obvious where the influence of paternal authority and interference is least apparent.

The professors of the KING'S COLLEGE are not unconscious of the dead weight which was at first fastened on their too-pliant necks. Elected without public examination, appointed without any public scrutiny into their attainments or into

their capabilities for discharging the important duties of their offices, they must, if they be men of sense or prudence, and possess common penetration, have known from the commencement, that a mode of elevation, thus opposed to the demands and rational expectations of society, would of itself be sufficient to attract towards them the searching eye of suspicion; but when they further recollected that they were chosen as *tools*,—as agents,—if not for the actual dissemination of darkness—to counteract, by their professional functions, the diffusion of light springing from a not very distant source, they must have been stung with remorse and shame at their degraded position. Accordingly, we wonder not on finding that they instructed Mr. GREEN, who, we see by his published lecture, opened the session on the first of the present month,—to speak of the institution as a "*national*" one, calculated to "expand in all its departments," and to "induce its members to despise the hollowness, the trickery, the ostentation, the littleness, which consist in the ambition of being great to little minds, and the *low arts* of levying a lucrative tax on *ignorance* and *folly* for the maintenance and thriving of *pretended knowledge*." Thus the intentions of the *benevolent* founders are already spurned by those very professors who were thrust into their chairs by the friendly hands of archbishops and bishops, Sir HENRY HALFORD, Sir ASTLEY COOPER, and Co. Finding that the public have no taste for such a *thing* of an institution as was at first propagated, the professors, in order that they may not address themselves to unoccupied seats, nor look for remuneration of their services, they have done heretofore, to empty coffers, they already—as we find by Mr. GREEN's discourse—speak of the KING'S COLLEGE as a "national" institution, and denounce, as unprincipled, the "levying of a lucrative tax on ignorance and folly, to the maintenance and thriving of pretended knowledge,"—a confession pregnant with the strongest evidence of truth, candour, and discretion.

Although prepared for an indication of such feelings on the part of the professors, we confess that we are somewhat astonished at seeing such a *broad*, Newgate confession as that made by Mr. GREEN; and, if we mistake not, those of Mr. GREEN's robed coadjutors, who happened to be present at the delivery of the discourse, were not a little astounded on hearing this *clear*, distinct denouncement of the dishonour attending the "levying of a lucrative tax on the transfer of pretended knowledge." Startled, too, they must have been in no ordinary degree, on hearing their colleague openly protest, in equally *well-understood* terms, against the continuance of that trade in which "ignorance and folly" are the staple articles of the collegiate market. Not that we deny the good feelings of the professors,—not that we dispute their intentions,—as to some *indication* of those feelings, but we question whether the contemplated such a *sudden* promulgation of so broad a confession! Besides, we rest particularly on the words "clear and distinct," for we are strongly inclined to conjecture that Mr. GREEN was selected to be the orator on this occasion, for the special purpose of only affording a *glimmering* of that light which, to the amazement, if not dismay, of his colleagues, he has now exhibited in a fearful, unbroken blaze,—a "*tax*" on the sale of "pretended knowledge" having been pronounced by him in a sentence so constructed as to grammar, that it might be understood by a child just out of the cradle. Mr. GREEN's forte in oratory consists in the power of *mystifying*; in writing he maintains the same ambiguity of character; hence, doubtless, exclaimed the professors,—at their conclave held in the summer, and when the arrangements for opening the present session were in progress,—"Here is a woful quandary we are

in! The public have no taste for 'pretended knowledge;' they refuse a levy on 'ignorance and folly;' they say that we have only opened our doors here for the purpose of shutting out the light diffused from the porticoes of the University of London,—that ours is an institution calculated only to foster the bad passions, and sharpen all the worst feelings of human nature; that we are the tools,—the hired, but *unpaid*, agents of bishops, priests, and deacons; and that hence we are instructed to repudiate the light of knowledge, and to perpetuate the darkness of prejudice and error. Wherefore let us break our chains; let us—seeing that we can get no remuneration by carrying on the trade founded by priestcraft,—let us talk, on the opening of the session, of our institution being a *national* one, and say that we abhor in our very souls making the ignorance of mankind an article of pecuniary traffic. But, it must be done gently; if we speak too openly at first our object will be suspected, and the name which we now bear amongst the liberal portion of the public,—that of being the servile instruments of the hierarchy, will be merely exchanged for that of 'band of interested knaves.' Thus we must be cautious, and give the public, in October next, only a *glimmering* of that light which we shall be prepared to send forth, in a full blaze, in October twelvemonths. Brother GREEN, will you undertake this office! —you, whose powers of oratory are acknowledged, and whose success in dealing with subjects difficult of explanation is as proverbial as nursery sayings?" Whereupon, doubtless, Mr. GREEN, elated by the honour conferred upon him by his colleagues, thus eloquently and clearly addressed himself to them in reply:—

"Renowned and regenerated colleagues! Hallucinating amidst the hyperbolically-interwoven mysteries of cærulean space, my mind approaches you in that descensive circle of scientific wonders, amalgamations, subordinations, concatenations, mystifications, explanations, pronunciations, exterminations, peregrinations, and conglomerations, created — exercised — influenced — established — nurtured — promoted—elaborated—evolved, under that social system of improved, re-enlightened, amalgamated man—under his new form, that is, in his state, anterior—that is, before that period when the unities of the spirit had not intermixed their principles with the radiating attributes of genial grace." Regenerated and renowned brother professors ——"

"Thanks, thanks, brother GREEN, for your acceptance of the office, and your clear illustration of your intentions—of the mode in which you will discharge your functions. We have only to hope that you will not be *too* lucid in your declaration of the principles which are to govern our future conduct in the chairs of this college. It is not our *present* purpose to yield light to the community, but just to let the public know that we are not quite contented with our trade of darkness."

"Enough, brothers," responded the "descensive" professor, "your commands shall be scrupulously, carefully, faithfully, zealously, religiously obeyed."

Stimulated probably by the binding character of such a condition, and the exalted mission which he was appointed to execute, Mr. GREEN commenced his labours, but (unfortunately for his colleagues) Mr. GREEN happened to step out of his mysterious "descensive circle" just at that very moment when they would have had him confined to its very centre. Unfortunately for the conclave, nothing can be more lucid than his reprobation of that atrocious system which the KING'S COLLEGE was founded with a view of perpetuating. Nothing, in fact, could carry home a clearer conviction of the meaning of the speaker than does the language of Mr. GREEN, where he condemns the "levying of a tax on ignorance and folly for the maintenance and thriving of pretended knowledge."

Leaving the professors to expostulate or condole with their colleague, who for once left his "descensive circle" to make an eccentric movement, we must now for one moment direct an eye to Mr. GREEN in his extraordinary "evolutions" while engaged in weaving the unravellable net of his discourse. It is impossible to contemplate such a labour, without being agitated alternately by feelings of deep regret and excessive mirth: regret, at seeing a really estimable man, a gentleman of honourable and benevolent mind, a decidedly able surgeon, a skilful operator, a particularly scientific practitioner in his profession, an attentive observer of all social, friendly duties, and moreover, a humane attendant on the sick in his professional capacity—it is, we say, a source of deep regret to see such a man leave the firm ground of *fact*, where he might hold a secure and commanding station, to plunge into regions where his conceptions can find no resting-place,—where he cannot meet with a single track to guide him in his wild and flighty course, but where he turns and flounders, twists, darts off, then back again, like a bewildered bird, above the clouds, tossed from the car of a balloon; and when no longer capable of sustaining the unequal conflict with the aerial element, down he whirls in his own "descensive circle," plump once more on mother earth. When Mr. GREEN leaves matters of fact, and attempts to grapple with subjects of abstruse speculation,—when, indeed, he proceeds beyond the fair and obvious train of the most palpable inductive reasoning, away he shoots like a sky-rocket—WHIZ—pop—diddle—diddle—diddle—confusion—*darkness*. But, to confine ourselves to a delineation in type of these extraordinary flights of bombastic sentimentality, folly, and obscurity, we must refer to the words of the address to the professors already quoted. Further, in justice to Mr. GREEN, we will present some passages from the lecture itself, precisely as we find them printed, without altering point or letter. These, however, from want of space, must be deferred to our next number, when we shall take occasion to enter upon a more important ground, and to offer our protest against the *matter* of the discourse.

OUR readers will be happy to see in THE LANCET of this day a satisfactory vindication of the medical gentlemen of Ennis, from the inconsiderate and unfortunate imputation to which they were subjected in Dr. Williams' reports. As Dr. Williams will doubtless learn caution from this occurrence, we will not increase the annoyance he must already experience, by adding a word of censure to the documents we publish.

GROUNDLESS IMPUTATION ON THE MEDICAL GENTLEMEN OF ENNIS.

To the Editor of THE LANCET.

SIR,—At a meeting of the medical gentlemen of this town, held for the purpose of considering a statement in your publication of the 1st of September, purporting to be a Report, conveyed by Dr. Williams of the 68th regiment, and tending to reflect on the character and humanity of the profession in this town, from motives which it is difficult to define—(the expression to which we allude is, "Several of the physicians left the town from fear, and others decidedly refused their attendance, either on the military or civilians, for any remuneration whatever")—we are perfectly and decidedly of opinion, that the assertions conveyed in that Report, so far as *we* are concerned, are utterly *groundless*. In corroboration of this opinion and declaration, we beg you to insert the following statement, received by us from Dr. Williams, it being previously notified to him that it was intended for publication.

"Camp near Clare, Oct. 6, 1832.

"GENTLEMEN,—A paper having appeared in THE LANCET of the 1st of September, in which extracts from my Report to the Army Medical Board are published, in one passage a reflection is thrown out on the medical gentlemen of Ennis, which I now on investigation find to be incorrect.

"You must be aware, that in making reports to the Director General, it was desirable to collect all the information from the adjacent towns; and being myself constantly occupied in the Regimental Cholera Hospital, I necessarily became dependent on others for information connected with the prevailing disease, and I regret having been led by the Reports of the day to mention anything which might reflect upon the kind and humane attention evinced by those gentlemen during the lamentable existence of the disease. I have the honour to be,

"Gentlemen,

"Your most obedient humble servant,

"RICHARD WILLIAMS,

"Surg. 68th Regiment.

"To the Medical Gentlemen, Ennis."

We request you to insert this statement in your next publication.

(Signed by order)

PERCIVAL BANKS, M.D., M.R.C.S., Chairman.

Ennis, County of Clare,
October 9th, 1832.

CLINICAL INSTRUCTION IN LONDON AND EDINBURGH.

To the Editor of THE LANCET.

SIR,—Having read Dr. Elliotson's lecture in a previous week's LANCET, I am induced to offer a few remarks on that part of it which relates to the Edinburgh Clinical Lecture. Dr. Elliotson appears to be indignant at the assertion of the *Quarterly Journal of Education* for last June, "That the clinical courses in Edinburgh are among the most valuable parts of the excellent system pursued there," and "that the clinical lectures in London are quite undeserving the name—inapplicable to the patient at the bed-side, and to particular cases."

He then goes on to show that *his* plan of giving clinical instruction is superior to the Edinburgh, and says "the anonymous castigator convicts himself of perfect ignorance of the present clinical teaching of London in those hospitals where clinical instruction is given at all." But with the exception of Dr. Elliotson's clinical instruction (the plan of which I can see no objection to, excepting that a physician of Dr. E.'s knowledge and experience must expect to have as many calls upon his valuable time in private practice as to preclude the possibility of his giving up two or three hours every day to his pupils) where is to be found any thing efficient in "the present clinical teaching of London?" His remarks on the Edinburgh system, I am aware, contain much truth, as to what takes place in the clinical wards, but the learned professor should remember the old proverb, "Ye may take a horse to the brook, but ye canna gar him drink." That there are idlers who will not make use of the opportunities for instruction, is *true*; but that the students, one and all, cannot avail themselves of it, I beg to deny. The professors are always most ready and willing at the time to give any information or explanation necessary. There is one advantage, amongst others, in the Edinburgh plan, and that is, that the clinical cases are selected from among the other patients, and every case taken into the clinical wards is mentioned in the lectures. The students being more advanced generally in their medical knowledge than in London, they are expected to "use their eyes, their ears, and their hands," for themselves, which they have every opportunity of doing, either before, at the time, or after the professor's visit.

Having said so much for the Edinburgh plan of what a student may do if he chooses, I am free to confess that the learned professor's plan for the London University (if he be able to carry it into effect, and to continue it) is more likely to urge the idlers to further exertion, and so far is preferable. But still Dr. Elliotson's clinical instruction at St. Thomas's Hospital is not "the present clinical teaching of London," and, therefore, with the exception of St. Thomas's, "the castigator" is correct. Apologizing for the length of these hasty remarks, I remain, Sir, yours obediently, J. W.

London, Oct. 10th, 1832.

TO CORRESPONDENTS.

Received Letters from B.—Student—Mr. Gravenor—A Governor of St. Bartholomew's Hospital—A Licentiate—A Slave—Mr. Rutherford, Medicus, Mr. Barrow, Mr. Phillips, Mr. Owen, and many other Correspondents.

A Country Practitioner. Scores of such cases have occurred. A flagrant instance of similar indifference was communicated to us a week or two since, as having occurred at Romford. A man named Lee, died of unequivocal symptoms of Asiatic cholera, and his case was reported to the Central Board of Health by the surgeon (Mr. Butler) in whose practice it took place. The inhabitants forthwith met in vestry to debate on the necessity of forming an efficient Board, which was decided in the negative that there had been no case of cholera there! The medical gentlemen of the town were all of them in the *minority* on this occasion, yet this mode of deciding upon a medical case, was acted on and abided by.

(*From the Publishers*) a New Edition of Dr. Hooper's Physician's Vade Mecum, or Manual of the Principles and Practice of Physic, will be published in a few days, very considerably enlarged, and brought down to the present state of science.